The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 519.—Vol. XV.] LONDON: SATURDAY, AUGUST 2, 1845. [Price 6d.

BROWNWILLY.—VALUABLE FREEHOLD AND OTHER PROPERTY, situated in the most renowned MINING DISTRICT in the county of CORNWALL.—TO BE SOLD, BY PUBLIC AUCTION (free of Auction Duty), by Mr. COAD, at Oliver's Hotel, Bodmin, on Tuesday, the 5th day of August next, at Four o'clock in the afternoon, LOT I. 1

The fee-simple and inheritance of and in all that tenement known by the celebrated name of BROWNWILLY, situated in the parish of ST. BREWARD, otherwise Symonward, in the county of Cornwall, containing about 399A. 0R. 33P. of land, with an extensive right of common, now in the occupation of Philip Ham, as tenant at will. There is an annual profit payable to the proprietor of the above tenement, arising from Tin Stream Works thereon, now in a prosperous state of working.

LOT II.

All that messuage, tenement, and premises, called FEARNACRE, adjoining Lot I., and also situate in the said parish of St. Breward, otherwise Symonward, containing about 65A. 1R. 24P. of land, now in the occupation of the said Philip Ham, as tenant at will. One moiety of this lot is held in fee-simple, and the other moiety for the remainder of a term of 999 years, of which 721 years are now unexpired.

The fame of "BROWNWILLY" is too well-known to render it necessary to enlarge on its position as one of the most prominent "Lions" of Cornwall; but, it may be added, that, by reason of the recent extraordinary, grand, and lucrative discoveries in the mineral productions of the lands in this, the Eastern, part of the county, where the "Caradons," and other mines in their qualities and quantities of the various ores and metals are bearing away the palm from those of the Great "Tresavean," and others in its neighbourhood in the west, where alone, until within the last four or five years, those hidden treasures were supposed to be found, this fine property (in which as yet no trial for those riches has been made, except for tin, of which considerable quantities have already been discovered and sold, but towards which all those neighbouring valuable mines, now in full operation, are driving and approaching) may be considered and fairly estimated as one of the most inviting, attractive, and precious, ever offered for competition, and well worth the attention of capitalists and speculators in mine adventures.

The above property is situated about twelve miles from Liskeard, twelve from Launceston, twelve from Bodmin, and four from Camelford—all of them market towns of high repute, and rendered more so of late by the increasing populations congregated thither by the numerous additional mines springing up in their vicinity; and the various railroads from Exeter to Falmouth, with their branches, will afford every facility for a ready sale of the produce of this property, whether of agricultural or mineral production.

The respective tenants will show the premises, and for further particulars, application must be made (if by letter to be post-paid) to Messrs. Glubb, solicitors, Liskeard; or Messrs. J. and H. T. Smith, solicitors, Devonport.—Dated July 7, 1845.

VALUABLE LEASEHOLD LEAD MINES, MACHINERY, &c., FLINTSHIRE.—TO BE SOLD, BY AUCTION, by Mr. JAMES WILLIAMS, at the BWLCH-Y-DDAU-FRYN MINE, near MOLD, in the county of Flint, on Tuesday, the 12th day of August, 1845, at Eleven for Twelve o'clock precisely, in one or more lots, as may be agreed upon at the time of sale, and subject to conditions, the COMPANY'S LEASEHOLD INTEREST in the BWLCH-Y-DDAU-FRYN, GARREG-BOETH, and DOLYFECHLAS MINES, situate in the parishes of CILCEN and MOLD, in the said county. These mines are held under leases granted by Mrs. Allanson, Edward Lloyd, John Taylor, Esqs., and others (having several years to run and subject only to the usual royalties)—are situate in a district abounding with lead ore, and upon the well-known "Bwich-y-Ddau-Fryn" and "Garreg-Boeth" veins, and adjoin the celebrated Pant-y-mwyn, Coed-yr-Hendre and Bryn-celyn Mines. 2

There are whimsey shafts sunk and several day levels driven in the veins at the depth of 80 and 100 yards and upwards, in which successful operations are carried on, and as there is a great extent of fresh land in their direction, it is confidently expected that persons having capital, and desirous of employing it to advantage, will find this, in every respect, a favourable opportunity for doing so.

The respective mines will be shown, and further particulars had, by applying to Capt. James Edwards, Bwich-y-Ddau-Fryn Mine, near Mold. The maps and leases may be inspected at the office of the auctioneer, Mass-y-dre, Holywell.

Also, at Two o'clock in the afternoon of the same day, the STEAM PUMPING ENGINE, and other valuable MINING MATERIALS, &c., comprising an excellent 36-inch CONDENSING STEAM-ENGINE, 7 feet stroke in the piston, 7 feet in the pump, with two cylindrical boilers, 28 and 30 feet long (one of which is new, and the other recently put into thorough repair), complete, with balance-bob, &c., eighty yards of 9-inch main rods; plunger and drawing lifts (9 and 10½ inch); hand pumps and lifts, plunger poles, drawing lift, 20 yards long, with 9-inch working barrel, one 8-inch working barrel, 10 ft. long, steam and feed pipes, six and eight-arm capstans, shears, and ropes, brammock, bob, rods, and pallies, pedestals, &c.; a large quantity of round and bar-iron, scrap, wrought, and cast ditto, whims and ropes, chains and kibbles, anvils, bellows, vices, and other smithy requisites, capital weigh beam, scales, and weights, quantity of old ropes, useful timber, &c., tubs and barrows, a few office fixtures, and other miscellaneous effects.

N.B. The winds will be sold at the Bwich-y-Ddau-Fryn Mine, and descriptive catalogues may be had five days prior to the sale, of Captain James Edwards, on the premises; or of the auctioneer, as aforesaid.

SHROPSHIRE.—VALUABLE FREEHOLD MINING PROPERTY, containing 136A. 3R. 26P., or thereabouts, with a most excellent MANSION HOUSE, called PRIORSLEE HALL, situate at Priorslee, in the parish of Shifnal, within two miles of the town of Shifnal, and close to the turnpike-road, leading from Birmingham to Shrewsbury, and within a mile of each of the projected lines of railroad from Birmingham and Wolverhampton to Shrewsbury, and six miles from the town of Wellington, TO BE SOLD, BY AUCTION, in one lot, by Messrs. WALKER and PAGE, at the Swan Inn, Wolverhampton, on Monday, the 18th day of August, 1845, at Five o'clock in the afternoon, subject to such conditions as will be then produced. 3

For further particulars apply to Messrs. Pritchard and Co., solicitors, Broseley, Salop.

CAPITAL, EXTENSIVE, AND VALUABLE SLATE QUARRY, with immediate possession.—TO BE LET, OR SOLD, all that capital, extensive, and valuable QUARRY of SLATES, of the best quality, now open, and in work, called Rhiwbach, together with the cottages and other offices attached thereto, situate in the parish of PENMACHNO, in the county of Carnarvon. The above quarry has been worked for about twenty years, and is situate within two miles only of the Ffestiniog Railway, along which is conveyed the slate from the neighbouring extensive quarries to Portmadoc; and, by a comparatively small outlay, a road might be made from the above quarry to the said railway. It is also situate about fourteen miles from Trefriw Quay, on the River Conway—an excellent shipping for vessels of large tonnage. The quarry is capable of being extensively and profitably worked by an experienced and spirited capitalist, who will find the above well worthy of his notice—terms liberal. Also a comfortable HOUSE, with an extensive FARM.—For further particulars apply (if by letter, post paid) to Mr. Mouledale, Gwynfy, Anglesey. 4

TO CAPITALISTS.—CARMARTHENSHIRE AND GLAMORGANSHIRE, SOUTH WALES.—The AGENT of an extensive ESTATE calls the attention of IRONMASTERS, COLLIERS, MANUFACTURERS, FARMERS, and CAPITALISTS in general, to this announcement. He is prepared to enter into arrangements with respectable parties for the LEASING, on long terms, of various descriptions of PROPERTY, now the objects of public attention—anthracite, bituminous and steam coal, culm, ironstone, limestone, marble, flag, and other quarries; fire clay and brick earth, sites for building at and near a flourishing and fast-rising commercial town, seaport and floating dock, for manufactories, ship-building yards, wharves, store and dwelling-houses; and in the coal and iron districts sites for works joining a railroad and canal, leading by their main trunks and branches to three seaports—water-power is almost general. Situations for rural and marine residences in the most beautiful parts of the country, commanding views of Swansea and Carmarthen Bays and the back mountain, with good roads, cheap markets, and daily communication with Bristol, Gloucester, and the metropolis. The sportsman will find his pursuits rewarded with woodcock, snipe, and other game in winter; and, in summer, trout, salmon, and the much-esteemed sewin—a fish peculiar to the principality. 5

The estate, containing 12,000 acres, is situated in twenty-four parishes, offering every variety of soil and scenery to the admirer of the picturesque, and numerous objects of interest to the geologist.

As an inducement to capitalists to embark in such agricultural improvements, as draining, planting, erection of proper homesteads, &c., which now so deservedly occupy public attention, leases of ninety-nine years (a term usually confined to building leases) will be granted for those purposes. Cheap food, cheap labour, cheap fuel, and cheap raw material of every description, will give the manufacturer an advantage over every other part of Great Britain; while the large and still increasing trade in coal affords an intercourse with all parts of the world for the transmission of raw materials from other localities at cheap back freights, and for forwarding to their destination the manufactured articles.—This more particularly applies to those undertakings where the consumption of coal forms a principal ingredient. The South Wales Railway will pass through the town and the three seaports, and through and near a large proportion of the estate near the sea coast, while the contemplated Welsh Midland Railway will bring the collieries, ironstone, limestone, and other quarries within an easy distance of the agricultural counties of Hereford and Worcester, and the great chain of railway communication connecting Birmingham, Liverpool, Manchester, and all the important manufacturing districts of England.

For further particulars apply to Mr. F. L. Brown, solicitor, Llanelly, Carmarthenshire; or to Mr. John Williams, solicitor, 1, Verulam-buildings, Gray's Inn, London.

STEAM-ENGINES, from 8 to 16-horse power, ALWAYS in STOCK.—Apply to Mr. Capper, engineer and ironfounder, Birmingham.

Price.....£12 per horse. 6

N.B.—CASTINGS AND PIT WORK MADE TO ORDER.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this." Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 7

MINE MATERIALS.—I. T. TREGELLAS, Quay, TRURO, presents his respects to MINERS, and begs to OFFER them the following GOODS, of good quality, and at the lowest market prices:—

IRONS, including best Shropshire Bars, extra-refined Chain Iron, Boiler-plates, Kibble-plates, Hoops, and Sheets	Smiths' Bellows
Steel of every description	Oils—of every kind
Coals	Grease, at the makers' prices
Gunpowder and Powder Cans	Fire Brick and Building Brick
Hemp and Wire Cordage	Pitch, Tar, Rosin, and Roman Cement
Best Scrap Chain, warranted	Anvils, Vices, and Files
Kibbles and Water Barrels	Leather
Nails of all kinds	Grindstones
Sheet Lead, White Lead, and Red Lead	Engine Shag and Sump Stripe
Shovels	Ore Ducks, Poldavy, and Sacking
Picks and Pick Moulds	Patent Felt, for covering cylinders, &c.
Mallets and Mallet Iron	Patent Roofing Felt, 1d. per square foot
Saws and Hatchets	Lifting Jacks
Shovel Hilts from 1s. per doz. to 5s. per doz.	Patent Fuse, Shooting Needles, and Clay Irons, and every other description of materials for general mine consumption
Pick Hilts	

Dated Truro, July 10, 1845. 8

ASSAYING AND MINERAL ANALYSIS.—IMPORTANT TO THE PROPRIETORS AND SHAREHOLDERS OF MINES, &c.—Messrs. MITCHELL and FIELDS'S LABORATORY is OPEN to GENTLEMEN for INSTRUCTION in all BRANCHES of ASSAYING, MINERAL ANALYSIS, and GENERAL CHEMISTRY; ASSAYS and ANALYSES conducted as usual.—For terms address to Messrs. Mitchell and Field, assayers, &c., 5 a, Hawley-road, Kentish-town, London. 9

COMBMARTIN AND NORTH DEVON LEAD AND SILVER MINES.—Notice is hereby given, that the GENERAL ANNUAL MEETING of the shareholders in the above concern will be HELD at the Counting-house, on the Mine, on Wednesday, the 20th day of August next, at Twelve o'clock at noon.

Combmartin Mine, July 29, 1845. C. R. WEBB, Secretary. 10

CONSOLIDATED COPPER MINES OF COBRE ASSO- CIATION.—Notice is hereby given, that a DIVIDEND of ONE POUND per share will be PAID to the holders of certificates in this company, at the office of the association, 26, Austinfriars, on and after the 7th day of August next, between the hours of Eleven and Three o'clock. The proprietors are requested to leave their certificates at the office for examination three clear days before the day of payment.

By order of the court of directors,

26, Austinfriars, July 22, 1845. WM. LECKIE, Secretary. 11

UNITED MEXICAN MINING ASSOCIATION.—Notice is hereby given, that a DIVIDEND of SEVEN SHILLINGS and SIXPENCE per share will be PAYABLE at the office of the association on and after Wednesday, the 13th of August next, between the hours of Eleven and Three.—Forms for claiming the dividend personally, or by power of attorney, may be obtained at the company's office, and must be left three clear days for examination previous to payment.

By order of the court of directors,

8, Great Winchester-street, London, July 30, 1845. JOHN MATHER, Sec. 12

**** The holders of scrip shares will not be entitled to receive the dividend until their shares are registered.

THE PATENT GALVANISED IRON COMPANY call ATTENTION to the following GREAT WORKS:—

The ROOFS of the NEW HOUSES OF PARLIAMENT, at Westminster.

The SHEDS, for building "first-rates," in the ROYAL DOCKYARDS, at Woolwich, Portsmouth, Deptford, &c. (the latter visible in passing down the Thames, and is an object of great beauty, having a span of eighty-two feet). The Timber Sheds, and other buildings, in the Royal Dockyards, are also being roofed with this fire-proof material.

The Trinity Board CONSTRUCT their BUOYS with this patent article.

The ELECTRIC TELEGRAPHS are CONSTRUCTED with the Patent Galvanised Wires.

For ROOFING, in all climates, it is admirably adapted, being Fire, Lightning, and Hurricane proof. To make it secure against lightning, it will only be necessary to form a continuous line of communication with the earth—which Galvanised Iron Spouting attached to the roof will do.

For SHIPS' SHEATHING and FASTENINGS, in lieu of copper, the following CERTIFICATE is offered, amongst many others:— 13

Lloyd's Register, London, February 7, 1845,
2, White Lion-court, Cornhill.

The undersigned surveyors to this society did, at the request of Messrs. Mallins and Rawlinsons, examine the Patent Galvanised Iron Sheathing upon the bottom of the brig *Mary Stewart*, lying in Messrs. Curling, Young, and Co.'s dry dock, Limehouse, and lately returned from a voyage to the island of Ichaboe, on the coast of Africa, and found it unbroken and perfect throughout the vessel's bottom, and no appearance of corrosion or oxide of iron upon its surface. The iron that had been exposed by puncturing the nail holes had become coated with zinc—the sheathing was nearly clean, and free from marine grass and animalculæ. It appears to have answered very well during the before-mentioned voyage, and the ship has sailed without it being found necessary to do any repairs to it.

PETER COURTENAY,
I. H. RITCHIE, } Lloyd's Surveyors.
JAMES MARTIN,

For all DOCK-WORK, chain or wire bridges, for wire ropes chain rigging, wire fences, and an endless variety of purposes—fire proof buildings, corrugated doors, shutters, &c., it will be found invaluable.

The company are prepared to supply every article required.

London Office—3, Mansion-house-place.

Works—Millwall, Poplar; Phœnix and Lea Brook Iron-Works, West Bromwich, Staffordshire; and near Bridgend, South Wales.

CAUTION.

This PATENT, like every good one, is invaded, and, by the law's delays, parties are able to evade the consequences for some short time longer. But so they did with all the great patents and Neilson's for years: but one house had at last to pay upwards of (£100,000) one hundred thousand pounds penalties. BUYERS as well as SELLERS are LIABLE, and the PATENTEES will PROCEED AGAINST all PARTIES who INVADE this—one of the most IMPORTANT INVENTIONS ever brought into use. Actions are proceeding against Messrs. Morewood and Rogers, Messrs. Walker (Gospel Oaks), and many others.

PATENT GALVANISED IRON COMPANY.

PATTESON AND OTHERS V. HOLLAND, MOREWOOD, AND OTHERS.

In the Court of Common Pleas, on the 9th inst., the argument for the new trial came to a hearing, when the Court recommended the question to stand over, until the writ of *scire facias* sued out by Messrs. Morewood and Rogers had been brought to trial (which, unfortunately, cannot take place before December). Trial by "*scire facias*" is the proper mode of testing the validity of a patent, and should have been resorted to by Messrs. Morewood and Rogers, and Walker and Co., instead of invading Craufoud's patent, thereby saving themselves and their customers from a heavy responsibility, as the patent remains in full force, and all parties are hereby CAUTIONED against incurring the heavy penalties recoverable for infringing the said patent for coating iron with zinc to prevent oxidation. No doubt is entertained of fully substantiating this, one of the best and most important patents ever enrolled, and proceedings will be taken against all parties who invade it. The jury, in the cause "Patteson and others *v.* Holland, Morewood, and Rogers," tried in February last, decided all the issues in favour of the patent, except one upon the specification, upon which point the evidence at the future trial will correct the misconception which arose upon that issue.

3, Mansion-house-place, London, June 13, 1845. 14

PATENT GALVANISED IRON COMPANY.—NOTICE. —The Attorney-General has given his fiat, and a *scire facias* has been issued to REPEAL this COMPANY'S GALVANISING PATENT (Sorel's process), which was tried in February last, before Chief-Justice Tindal, in the cause of Patteson *v.* Holland, and was found by the jury to be invalid.—May 9, 1845. 15

PATENT GALVANISED TINNED IRON.

MOREWOOD and ROGERS' PATENT.

The PATENTEES beg to call the attention of the PUBLIC to the ABOVE METAL, which is being USED extensively by the LORDS COMMISSIONERS of the ADMIRALTY, the BOARD OF ORDNANCE, and OTHER PUBLIC BODIES,

FOR ROOFING AND OTHER PURPOSES.

The large WAREHOUSES and SHEDS in the LIVERPOOL DOCKS have had the ZINC with which they were formerly covered STRIPPED OFF, for the purpose of being COVERED WITH IT; and the NEW DOCK WAREHOUSES of that city are likewise being COVERED WITH THIS METAL.

It is peculiarly ADAPTED for RAILWAY STATIONS, as forming a light, strong, and incorrodible covering.

This PROCESS is the ONLY ONE by which the QUALITY of the IRON is PRESERVED, instead of being injured; and it is, therefore, so very malleable, that it may be worked up with the greatest ease into articles of all descriptions.

Further information may be obtained on application at the WAREHOUSE, No. 5, STEEL-YARD, UPPER THAMES-STREET. 16

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN. MURDOCH (successor and late assistant to Mr. Hebert) informs INVENTORS and PATENTEES, that at his OFFICE they can obtain

REFERENCE TO A CLASSIFIED LIST OF PATENTS,

(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure in forms not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and despatch. 17

RYE AND THOMAS, MINE AGENTS AND DEALERS IN STOCKS, RAILWAY AND OTHER SHARES, 80, *OLD BROAD-STREET, LONDON.* 18

ESTABLISHED 1834.

MR. W. FORDYCE, SHAREBROKER, 15, GREY-STREET, NEWCASTLE-ON-TYNE. 19

MINING AND RAILWAY OFFICES, 16, CORNHILL. —Mr. RICHARD TREDINNICK having entered into arrangements with PRACTICAL AGENTS and ENGINEERS resident in the several MINING DISTRICTS, whereby he is enabled to obtain the earliest and most accurate information affecting MINING and RAILWAY undertakings, proffers his services to the capitalist and adventurer in MINES and RAILWAYS, in the PURCHASE or DISPOSAL of SHARES, as also obtaining REPORTS or STATEMENTS with reference thereto.—Reference as to ability and the facilities possessed by Mr. Tredinnick will be readily afforded; and the strictest confidence preserved respecting all communications. 20

RAILWAY SHARES, &c., BY AUCTION, at the HALL OF COMMERCE.—Messrs. LAMOND and CO., Share Auctioneers, respectfully beg to announce, that their PUBLIC SALES of RAILWAY SHARES are held every Tuesday and Friday, at One o'clock precisely.—On TUESDAY NEXT, the 5th inst., in addition to their usual catalogue of Railway Shares, they will have the honour to submit, at Twelve o'clock precisely, the following MINING and OTHER SHARES—viz., Caradon Wheal Hooper, Fortescue, Wheal Norris, Wheal Mexico, West Wheal Concord, Royal Santiago, Tamar, Cobre, Callington, Tincroft, and various other Mining Shares, as per catalogue.—Also Thames Plate Glass, London Gas, Grand Junction, Oxford, Milton, and Oakham Canals. Bank of British North America, Norwich Union, Reversionary Society, Stockton & Hartlepool Railway, and about 3000 Railway Shares, at One o'clock precisely. 21

RAILWAY, SHARES, &c., BY AUCTION.—TO SHARE- HOLDERS AND CAPITALISTS.—Encouraged by the recent increase of business in the sale and transfer of shares in the various public companies, British and foreign, and acting under the advice of friends and capitalists, Messrs. Lamond and Co., licensed auctioneers, have deemed the additional occupation thus created, together with the abolition of the auction duties, a fit opportunity for opening a separate and independent practice, to which they have determined to devote their undivided attention, declining all other business for this express purpose—viz., "the sale by auction of shares in railways, British and foreign, assurances, mining, cemetery, and canal companies, joint-stock banks, debentures, bonds, &c., &c.;" in short, of every description of interest connected with the numerous public companies formed and now forming in the commercial world.

In arriving at this determination, it will be the anxious desire of Messrs. Lamond and Co. to give every information and satisfaction to their friends and the public, and looking at the probable magnitude of operations yielding adequate remuneration, they have resolved to adopt a low scale of *ad valorem* charges, by way of commission, and where sales are not effected, a small fee, merely sufficient to cover the expenses of printing, advertising, &c., &c., for putting up the lots.

To avoid any misunderstanding, a deposit of 10 per cent. will be required on all purchases at the hammer, unless the same be effected through bankers, members of the Stock Exchange, or parties well known to the auctioneers; and a settlement of the remainder of the purchase-money, must, in every case, be made in the course of the following day, during the usual hours of business, or the sale will be void, and the deposit forfeited, except when special transfers are required, and to such all possible expedition will be given.

As all scrip and share certificates must be deposited for examination at least one day previously to their being offered to public competition, Messrs. Masterman and Co., bankers, Nicholas-lane, and Messrs. Ransom and Co., bankers, Pall Mall East, London, have been pleased to allow reference to be made to them in regard to the respectability of the firm of Lamond and Co.

They purpose selling every Tuesday and Friday in each week, in their rooms, at the undermentioned hall, at One o'clock precisely for the future, instead of Two o'clock as hitherto; the first sale having commenced on Tuesday, the 3d day of June. Letters and orders containing instructions, are respectfully requested to be addressed as under, where one or more of the partners will be always in attendance to be conferred with, if required; and advices of the operations of the day will be forwarded by the first post after each day's sale, and the proceeds paid according to their correspondent's instructions.

Messrs. Lamond and Co. further propose to take subscriptions of £1 1s. per annum from all parties desiring to have catalogues sent them on the night before the sale, except bankers, members of the Stock Exchange, and subscribers to the Hall of Commerce, to whom they will, on application, be delivered gratis; but, to prevent inconvenient intrusion, no one can be admitted into the sale room without a catalogue, which, if furnished at the door, will be charged 1s.

SCALE OF CHARGES.

One Shilling per Share	under	£20	0	0
One Shilling and Sixpence	under	50	0	0
Two Shillings and Sixpence	under	100	0	0
Five Shillings on all above.				

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And Two Shillings and Sixpence per lot, offered for sale (be the number of shares in such lot more or less) when sales are not effected.

Hall of Commerce, Threadneedle-street, London.

CORNWALL RAILWAY—At a MEETING of DIRECTORS of the Great Western Railway Company, Bristol and Exeter Railway Company, Bristol and Gloucester Railway Company, South Devon Railway Company, and Members of the Provisional Committee of the Cornwall Railway, and West Cornwall Railway, held at the offices of the Great Western Railway Company, London, on Friday, the 25th July, 1845,

PRESENT:

CHARLES RUSSELL, M.P., Chairman of the Great Western Railway Company, in the chair.

Frederick Ricketts, Esq., chairman of the Bristol and Exeter Railway Company
Thomas Gill, Esq. M.P., chairman of the South Devon Railway Company
E. W. Mills, Esq. } Directors of the Great Western Railway Company
R. F. Gower, Esq. }
John Watson, Esq. } Directors of the Bristol and Exeter Railway Company
Patrick Miller, M.D. }
Christopher Shapland, Esq., director of the Bristol and Gloucester Railway Company
Edward St. Aubyn, Esq. } Directors of the South Devon Railway Company
R. Cole, Esq. }
W. Fox, Esq. }
Michael Williams, Esq. } Members of the Provisional Committe of the Cornwall Railway.
W. M. Tweedy, Esq. }
R. B. Fox, Esq. }
W. R. Broad, Esq. }
Edmund Turner, Esq. M.P. } Members of the Provisional Committee of the West Cornwall Railway.
Louis Vigurs, Esq. }
J. O. Mason, Esq. }
I. K. Brunel, Esq., engineer of the Great Western and the Associated Companies
C. A. Saunders, Esq., secretary of the Great Western Railway Company
William Carr, Esq., secretary of the South Devon Railway Company
C. C. Whitehead, Esq., solicitor of the South Devon Railway Company
P. P. Smith, Esq., solicitor of the Cornwall Railway Company
F. Edwards, Esq., solicitor of the West Cornwall Railway Company
John Macdonnell, Esq., secretary of the West Cornwall Railway Company

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The resolution of the committee of the House of Lords on the Cornwall Railway Bill having been read and considered,

It was unanimously resolved—

That it is important for the interests of the Cornwall Railway Company, that immediate steps should be taken to give full effect to the said resolution.

That, in the opinion of the gentlemen present, the cordial co-operation of all parties connected with the provisional committee, and with the several associated companies, is essential for such object, and that each individual will recommend to their respective boards to continue their best assistance to carry the bill in the ensuing session.

That Mr. Brunel be requested carefully to survey the country, for the purpose of recommending such improvements or alterations in the line of railway as may seem to him expedient.

. . . . . .

That each of the associated companies, as well as the provisional committee of the Cornwall Railway Company, and also of the West Cornwall Railway Company, be requested to delegate to two members the power of assisting in the deliberation as to the proper steps to be taken, and as to the course of the improved line, upon receiving Mr. Brunel's report, and that such meeting be held in London, with the least possible delay.

—— CHARLES RUSSELL, Chairman.

At a MEETING of the PROVISIONAL COMMITTEE of the CORNWALL RAILWAY, held at Truro, on Tuesday, the 29th of July, 1845,

J. T. TREFFRY, Esq., of Place, chairman.

The resolutions passed at the meeting held at the offices of the Great Western Railway Company having been read and considered, it was unanimously resolved:—

That, in the opinion of this committee, the resolutions should be adopted, and immediately acted upon.

That a meeting of the shareholders shall be convened with as little delay as possible, and of which due notice shall be given. J. T. TREFFRY, Chairman.

Resolution of the Committee of the House of Lords.

The committee have resolved—That if the making of a railway to connect the towns of Plymouth and Falmouth, with a branch to the town of Bodmin, would be of great public advantage, by opening an additional, certain, and expeditious means of communication between the said places, and also by facilitating the communication between more distant towns and places;" but the committee are also of opinion, that it would not be advisable to adopt definitively the plan of railway communication which is intended to be carried out by the bill without a further and most accurate survey of the whole line of country traversed between Plymouth and Falmouth, with a view of obtaining gradients and curves more favourable, and avoiding the passage of the Hamoaze and of the Penryn river, below Penryn—if these last objects can be effected without any great countervailing cost and disadvantage.

The committee are, therefore, of opinion, that the bill should not be now further proceeded with.

RAILWAY GAZETTE.

THE GUAGES.

In this age of railway speculation, of railway corruption and cupidity, in which neither the honesty or the wisdom of our privileged law makers shine forth in the brightest colours, among the variety of farces which we daily see enacted within the immaculate walls of St. Stephen's, that of the *(professed?)* inquiry into the merits of the guages, and the consequences of an admixture of them all over the country, which is now daily the subject of remark, is the greatest. How much of evil-mindedness, of prejudice, or of bribery, in its vilest form, must be in operation, when we find a question whose very advocates are unable to support it with anything like sound argument, and one which no two sane, impartial, men in the kingdom differ upon, taking up the time of our House of Commons and Peerage committees, night after night, and during which the plainest truths which sober-minded people can by any possibility arrive at, are the ignorance or the prejudice of the parties who form the *dramatis personæ*. We have said so much on the subject in favour of a guage which is already occupying the length and breadth of the land, that it is really difficult to resume the subject without repeating former arguments. There happily, however, comes to our aid a pamphlet, published by Mr. Weale, of Holborn, and written by Mr. Wyndham Harding—a gentleman most competent to enter upon the subject, who, from having formerly managed a narrow guage railway, previous to his being appointed manager of the Bristol and Gloucester line, *the only one in the kingdom where the guages have yet met*, is perfectly able to institute a comparison between the practical advantages of each, as affecting the various descriptions of guages, and of the evils which must arise where two different ones clash. As the author has entered most fully into the subject, many of the remarks which follow are founded upon the pamphlet before us.

We have, in a former Number, observed that, when railways were first established, and even when Mr. Brunel succeeded in carrying out the 7 ft. guage, neither the public or the legislature had any idea of the extension which these now absolute necessaries of life would make, or that railways in different districts would ever clash with each other, and we are borne out in this observation by a clause in Mr. Brunel's report, during the discussion of the question among the proprietors of the Great Western, and which indicates that, had that gentleman ever thought of carrying Great Western branches into the midland counties, he would have consented to 4 ft. 8½ in. guage: he says—"Such is the position of the Great Western Railway, it could have *no other connection* with the main lines, and the principal branches likely to be made were well considered, and *almost formed part* of the *original plan*; nor can they be dependent on any of the existing lines for the traffic which they will bring to the main line. The Great Western was, therefore, free to adopt its own dimensions, and none of the difficulties, which would entirely prevent such a course in the north of England, had any existence in the west; consequently, all the general arguments advanced, and the comparisons made on the supposition of such difficulties ocurring, *all excellent in case they did*, are totally inapplicable to the case of the Great Western Railway, to which they have no reference whatever." Can this require comment? Have they no reference to the Great Western at the present day? In another part of this report, Mr. Brunel says—"Railway waggons and carriages must belong to the particular line on which they run, and except in such cases as the Grand Junction and Birmingham lines, which form in fact one railway though made by two companies, it will never pay to trust them into the hands of others." Mr. Brunel will not repeat this sentence now, when we may find Northumberland, Durham, and Hull waggons, as far south as Gloucester, and *vice versâ*; to facilitate which desirable intercourse, the "Railway Clearing Office," established in London, makes daily returns from all the stations they have passed, and each company is charged for the use they have made of the lines of other companies. Could these facilities exist if the guages were mixed in all the ramifications of the present northern and midland lines?

We will now say a few words respecting Mr. Brunel's machine, by which he proposes to remove the evils which the clashing would otherwise create. He proposes to hoist a narrow guage waggon on a wide guage truck; in this case its load must be kept down, in order to enable it to get under the bridges safely, and the centre of gravity would most probably be higher than desirable; at a station it would often be above the platforms, and it could not be easily unloaded or loaded with the usual facility, as it would be a foot distance from it, owing to the difference of guage. A great loss of power would ensue, as the engine would be drawing a 7 ft. waggon with only a 4 ft. 8½ in. load, and it would not be safe in practice, as, although a gentleman's carriage may be easily taken on a truck, an enormous unwieldy waggon rocking about when perched on a broad guage truck, and weighing six or seven tons, is a very different affair. But, if even we could get over all these difficulties, there is one still unanswerable. A broad waggon cannot be placed on a narrow truck, and there, we think, ends all argument on Mr. Brunel's machine, which, though highly ingenious, would be worse than useless in practice. With respect to the plan proposed, of laying down narrow guage lines within the broad, the same argument applies. Except in new lines, although a broad guage might be laid *within* a narrow, a broad one could not be laid *outside* a narrow one, without taking in additional land all along the line, altering all the embankments, cuttings, bridges, and tunnels, and entirely relaying the rails at a most immoderate cost—in some cases doubling the capital invested. The break of guage would thus separate the southern maritime coast of England, with its numerous ports and packet stations between Portsmouth and the Land's End, from the central, northern, and eastern counties of England, including the principal manufacturing and mineral districts, and a population of more than ten millions of persons.

With respect to safety, there is a notion very prevalent that a carriage with a wide base must be much safer than one on a narrow base, as less liable to upset as a highly laden coach would do; this is entirely a mistaken idea with regard to railways—it never has happened, except where, in getting off the rails, a carriage may be hurled over an embankment or a bridge (as in the accident on the Great Western in June last); the width of guage has nothing to do with it. In this case also Mr. Brunel is evidence in our favour—he says: "I certainly never thought of the danger of upsetting from the narrowness of the base." The greatest number of serious accidents occur from collision, to which both guages are equally subject, and the most serious one from that cause was on the Great Western, when a slip from a cutting covered the rails. In 1842 and 1843, 48,000,000 passengers were carried on the railways in England, with the loss of only two lives by accidents, and of this number 45,000,000 travelled on the narrow guage.

We now come to the speed of travelling on the several railways, and we will take six average lines on the narrow guage, and then compare their average speed with the Great Western. The following are the miles per hour from returns published July 1st, 1845—viz.:

	Ord. trains.	*Swift trains.*	*Av. speed.*	*Total aver.*
Manchester and Birmingham	22	25¾	23¾	
London and South-Western	24¾	27½	26¼	
London and Birmingham	25¾	27	26¼	
London and Brighton	25½	32	28¾	25¾
Midland Counties	23¾	25	24¼	
Great North of England	22	28½	25¼	
Great Western	25½	27¾	26½	26¼

By this it will be seen that the average speed of the broad guage is be low the Brighton about 8 per cent., about on a par with the Birmingham and South-Western, and in the average of the six lines it has an advantage of about 3¾ per cent.; but, we believe, we could have picked out six lines on which the average would be against it. In this calculation we have omitted any notice of express trains, as being totally unconnected with general and safe travelling. One more argument put forward in favour of the broad guage is the extreme luxury of the first-class carriages, but this really is not worthy of notice; had the Great Western directors paid some decent attention to their second-class passengers, we would have given them credit for it, but these carriages—as if to form a contrast with the first-class—have always been most uncomfortable, cold, and draughty. Both classes of passengers on the narrow guage lines find every comfort and accommodation which can be desired; even in the third-class, comforts are not wanting; and, as the second and third-class passengers constitute *nine-tenths* of persons travelling by railway, it is most ridiculous to bring forward as an argument a mere shadow of a luxury prepared for first-class passengers, during a period of one, two, or three hour's sitting. We are not attempting to prove any superiority in the narrow guage, as we believe the two to be nearly on a par in speed and safety—in economy of course the narrow guage bears the palm; but, if the "rights of property," for which our law-makers are such sticklers, are to be preserved, if justice, and common sense are to have any share in the legislation of the country, the following trifling information will convince all right-minded men that the guage of 4 ft. 8½ in. should be the standard of all future railways:—

Relative Length of Lines of Railway Constructed, in Progress, and Projected, of each Guage.

NARROW GUAGE.		BROAD GUAGE.	
Completed ..... *miles*	1844	Completed ..... *miles*	278
In progress	614	In progress	52
Projected	6918	Projected	1311
	9376		1641

Or, as 5¾ to 1 in favour of the narrow guage.

PROGRESS OF THE ATMOSPHERIC SYSTEM ON THE CONTINENT.

As the introduction of atmospheric power for working several of the new lines of railways in England, about to be laid down (London and York, Manchester, Windsor, Portsmouth direct, *viâ* Croydon, &c.) is the subject of discussion, the following extract from *Le Chemin de Fer Belge* will, no doubt, be read with much interest:—In general there exists a great confusion on the different systems of atmospheric locomotion, that have as yet been tried or proposed. In all those undertakings, unfortunately, there is a spirit of nationality that prevails, which is deeply to be regretted, for if it was well sifted into, it would be found, that what is called the *English* system is the idea of a Dane, and the *French* that of a Pole. We will, however, make some remarks on each system, which differs very little one from the other, excepting in its application. The one has for its propelling power the vacuum, or *rarefied air*; the other the full, or *compressed air*. Suppose that between the two rails of a line and the whole of its length there is a tube, covered with clay, or asphalte, in which the vacuum will be made by means of powerful pneumatic machines, this tube contains a piston, which communicates with a band to the first carriage, it is therefore understood that there must be a long opening on the upper part of the tube, which must consequently be covered with a moveable belt, forming a sort of cap, this thus arranged, if one of the tubes are opened, the outward air enters, and drives the piston and train with all the power of atmospheric pressure. This is the idea that was set forth about thirty-five years ago by M. Medhwurst, an engineer, of Copenhagen. The idea was conveyed to the prolific land of England, and improved. After various attempts that were made by different engineers for ten or twelve years in vain, Mr. Clegg, and afterwards Mr. Samuda, succeeded, with some alterations, to construct in Ireland an atmospheric line of 2,800 metres in length. It must be acknowledged that this undertaking was conducted with the greatest skill, and our Government sent over several engineers, who made the most favourable reports, which obtained from the Chamber of Deputies a vote of 1,800,000 fr. to attempt a similar experiment in France. It is the railway company of St. Germain that has obtained this concession, and at present is having an atmospheric line constructed, that will take the passengers up to the terrace. To return back to the system, it must be stated, that the length of the edge, or groove, which gives passage to the conducting line, however perfect the valve may be, it always admits of a great quantity of air entering, by which it is estimated there is a loss of about 75 per cent. Among the best improvements that have been made, we will name the following:—

THE HALLETTE SYSTEM.—This distinguished engineer of Arras proposed to close the longitudinal opening of the tube by means of two waterproof linen tubes, covered with leather, which being filled with compressed air, adhere one to the other, and oppose the entrance of the exterior air, the flat band slides between the two linen tubes, the same as between two lips. This system was patronised by M. Arago, who made several very honourable allusions to it in the Academy of Sciences, and even in the National Tribunal, which does him great credit. An English engineer, well known to the scientific world, Mr. Cubitt, gave his high approbation of this valve, and there is no doubt that M. Hallette will easily obtain the concession of a short line, as an experiment to try his ingenious invention.

THE HEDIARD SYSTEM—consists in fixing on each side of the grooves two long steel blades, very thin and perfectly straight; these blades lean against each other. The great point, however, is to ascertain whether the outward air will not enter. It is stated that a society, with a capital of three or four hundred thousand francs, has formed itself for the purpose of trying the experiment on about 800 metres. This important essay is to be at St. Ouen, near Paris.

THE DEMBINSKY SYSTEM—is the invention of General Dembinsky, a Polish refugee, who is well known for some very curious inventions. He proposes to close the slit of the tube, by fixing on each side of this slit a small flexible tube, which is impervious to the air; in blowing into this tube it inflates, and rests itself against the side, which presents a vertical surface quite smooth. We are at a loss to imagine why he has not followed up this idea, having taken out a patent some years back. We can name many other systems that have been put forward, but not thoroughly tried, by Messrs. Pilbrow, Valerio and Julien, Labruére and Griffiths, Huet, Beaucert, &c. It appears to us, that in all the systems the valve is suppressed, from whence it arises, that the driving piston no longer communicates to the train in a direct manner, and can only enforce a movement on the wheels, which have scarcely any affinity to each other. Is it not, therefore, to be feared that, in case of accident, the piston, having its full power, does not go off in the tube with the quickness of a bullet? We submit these difficulties to the inventors, so that they may profit by them.

COMPRESSED AIR LOCOMOTION.—M. Andrand may, perhaps, be considered the founder of this principle of locomotion, having published a pamphlet about seven years ago under the title of *Compressed Air as a Motive Power; or, Natural Strength Compressed and Kept in Reserve.* The prevailing idea of M. Andraud is that, with the extensive branches of steam railways which are extending themselves on the continent, a time will come when coals, which do not reproduce themselves in the mines, will, at last, become exhausted; therefore, it is requiste immediately to foresee the inconvenience for the future, and try to establish a firm basis. For this object, he proposes to employ an aerial fluid, which can be condensed and placed in reserve in large recipients. As regards locomotion, this inventor proposes to establish at the proximity of the lines, at different distances, reservoirs well supplied as before stated. To bring this into use, M. Andraud proposes two different methods—the one high pressure, and the other low pressure. By the first system, nothing is changed in the present construction of railways—the engine alone undergoes a radical alteration—there is no longer a boiler full of hot water, no blazing fire, nor tender; but it carries instead a supply of 6 to 8 metres cube of compressed air, at 15 to 18 atmospheric degrees. With the use of low pressure—one or two atmospheres—the engine is entirely suppressed, and replaced by two vertical cylinders fixed at the head of the first carriage of the train.

THE PECQUEUR SYSTEM.—He is one of the most clever mechanics of Paris, and imagined the application of compressed air to locomotion on iron railways, which is a very ingenious combination of mechanism, and quite novel: he has a locomotive, and a tube placed, like all others, between the two rails. The locomotive is similar to the usual steam-engine without the boiler and fire; it obtains its force from the tube already described, in this manner—viz., the tube is cast, and serves as a reservoir for the air: it has no open groove; on the upper part is another tube much smaller, equally divided at two metres distance by a partition which forms so many compartments, which the inventor calls *chambers of distribution*; the compressed air passes from the reservoir tube into the distributing tube by means of special valves. By an easy mechanism the locomotive opens in passing the valves and inhales the air, which gives it motion; this system, like that of M. Hallette, was honourably mentioned by the secretary of the Academy of Sciences and the Chamber of Deputies.

THE CHAMEROY SYSTEM.—This is another method of employing compressed air on iron railways—there is a locomotive and a tube; the locomotive is a long waggon of 15 to 18 metres in length, having underneath a long propelling cylinder which is well represented by a section of the atmospheric tube reversed, having its groove, or valve, underneath; the upper part of this tube is closed by a screw. When the locomotive is put in motion, the cylinder operates on the tube, which opens the cock; the air then enters the cylinder and propels it forward, as it finds a support on the piston, which is immoveable and fixed to the ground. This impulsion carries the train on to the second, which acts in the same manner, and propels it on to the third, and so on to the end of the line. It is seen, therefore, that this propelling power does not drive it at once straightforward, but by successive jumps. The inventor considers that these shakes by this mode of propelling may be disagreeable, but, by an improvement, they will be overcome. A model, on this system, has been constructed by M. Chameroy on a scale of about 150 metres, and works in the most satisfactory manner. It has been seen by a great number of eminent scientific men, who expressed themselves highly pleased with its merits. It is expected that Government will give this system, as well as the others, a fair trial, so as to judge of the qualities of each. Several other systems of atmospheric or compressed air have been announced, in particular that of M. Jobard, our compatriot, and director of the Conservatory of Industry of Brussels. We shall not give any description at present of them, nor that of the atmospheric system of railway of M. Chapineaux, of St. Omer, until they have had an opportunity of trying them. The year 1846 leads us to believe will be a year of most curious and great experiments, and will display the wonderful ingenuity of the scientific men of the nineteenth century.

RAILWAYS IN CORNWALL.

SIR,—The decision of the Lords' Committee against the Cornwall Railway is a very important event in many respects; as, whilst it relieves the county from the evil of having a railway forced upon them, which is neither useful nor of public service, and also snatches the county from the clutches of that great and overbearing concern, called the Great Western Railway, it opens the door to the introduction of a road that may suit all parties; promote the communication between the ports of Falmouth and Plymouth; be accessible to all parts of the county, and afford the most ready, expeditious, and cheap mode of communication between that extreme western part of the kingdom, and the extreme northern and eastern parts, and thus produce the greatest amount of general benefit, which should be the objects of all such undertakings. At the same time that those advantages may be gained by the decision now come to by the Lords' Committee, it cannot fail to excite an inquiry as to the ground upon which the Board of Trade in the first instance, and the Committee of the Commons subsequently, reported in favour of the Cornwall line. The Board of Trade had the plans and sections laid before them—they heard no evidence for or against the undertaking, but they decided in favour of it. The Commons' Committee heard the evidence on both sides, as far as the gradients and curves were concerned; but, it appears that they would not permit any evidence to be produced which had a reference to any other line. They confined their inquiry to the capabilities of the line, which was immediately the object before them; they heard the evidence upon the more important points, which were requisite to form an efficient and desirable line, and they decided in its favour, without any reference to superiority, but merely upon the abstract question of its efficiency.

The Lords' Committee cannot be accused of having decided too hastily, or of having confined their inquiry to one particular branch of the subject. They received all the evidence that was brought before them, whether in reference to the capabilities or efficiency of the line, or to its inferiority to another line that might be made; and, they evidently were desirous that, whatever their opinions might be, or decision they might come to, it should be founded upon the true merits of the question before them. They heard the evidence of the engineers which were produced on both sides; they listened to the witnesses which were produced in support of another and a more desirable line, and, finally decided against the Cornwall line. Now, whatever conviction persons may arrive at in their own minds, as to the decisions of the respective parties to whom the question has been submitted from time to time, I believe that no unbiassed or candid person will be found to impugn the decision of the Lords' Committee. Nothing could be stronger than the evidence of the engineers was against the line. They were men of great experience in such matters, and whose judgment would have great weight with any person who might be desirous of arriving at the truth; and they declared, most unhesitatingly, that the line could not be worked expeditiously on account of the gradients, nor could it be worked at all, at any necessary speed for a railway, without great peril from the many very sharp and dangerous curves which abounded in its course. The committee had also the opinion of able nautical men as to the passage across the Hamoaze, and the effect that the line would produce upon Falmouth as a port, and those parties were most decidedly opposed to the line upon both those points.

Now, it would appear, to any plain, simple, and honest-minded man—at least one would think so—that the decision of the Lords' Committee was decisive against the line, and that the parties interested in it would abandon all idea of prosecuting it further; but, if we may judge from the tenor of the remarks of their organ in the county, it would seem that they consider that decision to be a victory, and not a defeat, and that the report of the committee is intended to convey the idea that the preamble to their bill had been proved; that the decision is "entirely in favour of the Cornwall line, which, it affirms, in the most satisfactory and conclusive manner, throwing totally out of sight every rival project, not even noticing the Central line as a possible alternative;" and this opinion appears to be founded upon the declaration of the committee, that "the making of a railway to connect the towns of Falmouth and Plymouth, with a branch to Bodmin, would be of great public advantage, by opening an additional, certain, and expeditious means of communication between the said places, and also by facilitating the communication between more distant towns and places."

Now, in what way is this to be considered a favourable decision for the Cornwall line, even when taken apart from the remaining portion of the report? Did not the Central line say the same thing, and provide for the communication, which is thought to be so desirable between the two ports? What is the branch to Bodmin for, is it to stop there? Would that facilitate the communication between more distant towns and places? This is the most encouraging portion of the report for them, and it would almost appear to be cruel to deprive them of the consolation it affords; but we must look, also, at the condemnatory part of the report, and see how that bears out the encouragement which they have derived from the portion already given. The report proceeds—"But the committee are also of opinion, that it would not be advisable to adopt definitively the plan of railway communication, which is intended to be carried out by the bill, without a further and most accurate survey of the whole line of country traversed between Plymouth and Falmouth, with a view of obtaining gradients and curves more favourable, and avoiding the passage of the Hamoaze, and of the Penryn river below Penryn, if these last objects can be effected without any great countervailing cost and disadvantages."

Can anything be more condemnatory of the line than this is? The committee are of opinion that it would not be advisable to adopt this plan, and this is affirming, "in the most satisfactory and conclusive manner," "that the decision is in favour of the Cornwall line!" The committee are of opinion, that an accurate survey of the line of country should be made, with a view of obtaining *gradients and curves more favourable, and avoiding the passage of the Hamoaze and the Penryn river.* This, I suppose, must be deemed to be a further confirmation of the approval of the Cornwall line by the committee. The evidence produced by the opponents to the line was precisely that which the report is founded upon. They stated that the line was bad in every respect, both as to gradients and curves—so says the report. The evidence was opposed to the crossing of the Hamoaze and the Penryn river—the report adopts the same view. In fact, if the committee had said at once, it is our opinion that the Central line of road possesses advantages in every respect superior to the Cornwall line, and we give our decision in favour of that line, they would only have declared directly that which their report affirms indirectly; and instead of drawing the inference from it, which the supporters of the Cornwall line have endeavoured to persuade the public it was intended to convey, it must be admitted to have decided totally against that line. There can be but one opinion, if it be honestly given, as to the advantages that must result by the adoption, throughout the country, of main trunk lines between the two extreme points of any part of the kingdom, intended to be brought into communication with each other by means of a railroad, and that those trunks must be made as directly as circumstances will admit of. However strongly this view of the question may be opposed at first, it will ultimately be carried into effect by branches or short roads being made, so as to connect distant roads with each other, until this great and important point be attained, and already is the system in progress, having this object in view. What would have been the consequence of travelling by coaches, had they been confined to branch roads from place to place? Would the rapid communication by coach conveyance ever have been attained under such restrictions, as that to which it had arrived, previous to the introduction of railroads? Let the inhabitants of the western, and most populous part of Cornwall, fancy their being compelled to go round by way of Plymouth in a coach to reach Exeter, and what would they say to it? Is it then of so little importance to them, that they shall be compelled to take that route, because they may travel by railroad? If expedition be their object, which after all can only be viewed in a relative sense, why throw away time by taking the Plymouth route, instead of going direct to Exeter by a central and more direct line? But time is not the only thing to be taken into the account, expense is another item of, perhaps, more import ance, and it cannot have escaped the attention of those who are interested

in travelling through the country, that the greater number of miles they travel over the greater is the amount of charge they have to meet; and they will find this to be the case by railroad, as well as by any other mode of conveyance. But the inhabitants of Cornwall must not overlook this fact, that the Cornwall line is but the tail end of a line which is the property of many adverse interests, and if those interests should clash, and disputes should take place, they will be made to pay the piper. The Great Western line only goes from London to Bristol; it is true, that at present they have a lease of the line from Bristol to Exeter, but that lease must expire at some period, and should the proprietors take it into their own hands, the power now exercised by the Great Western Company will, in a great measure, be controlled by that company in all their proceedings below Exeter, and the Cornwall line will be sure to feel the effects of it. The Cornwall line would be entirely defenceless, and could do nothing in protecting itself above Plymouth.

By-the-bye, one would almost fancy, from the great fuss and ado by the supporters of the Cornwall line, as to the importance of its being carried to Plymouth, that that town was the Cornishman's world, and that his ambition would be satisfied, if he could only be permitted to reach that place. It is but a poor compliment to the county to attach so much importance to Plymouth. I do not understand that it is a place about which the inhabitants of Cornwall are so very anxious; nor do I think that there would ever have been so much said, in reference to the importance of the railroad being carried to that place, were it not for the interest which some parties have in the Exeter and Plymouth railroad. This is the great secret of the whole proceeding, and it is sought to cover it, by bringing out more prominently the importance of connecting the two ports of Falmouth and Plymouth. This is not the object which Cornishmen have in view, by promoting railroad communication through the county. They wish to "facilitate the communication with distant towns and places," and which the Central and direct line will promote in a much greater degree than that through Plymouth can possibly do. The branch to Bodmin, mentioned in the report of the Lords' Committee, can only have in view the formation of a Central line at some future period, in order to carry out the recommendations contained in their report, and, that, from a conviction that "a communication with distant towns and places," through Plymouth, is not what is required for Cornwall, or that which would be at all conducive to the interests of the northern parts of the county.

Let Cornishmen, who may wish to see their county placed in an independent position, and who may wish to be freed from the nuisance of foreign interference, take advantage of the present fortunate situation in which they are so unexpectedly placed, and let them unite to carry out a line which would in every respect suit their convenience and meet their views. Surely there is public spirit enough in the county to shake off the dependance which the adoption of the Cornwall line would have brought upon them. If all parties join together to promote the object, which they appear to be desirous of effecting, a railroad may be made through the county at once, which will be of immense advantage to all parties; but, if they lose the present opportunity, and suffer others to carry into effect their plans for branches through the north-eastern part of Cornwall, and the north-western part of Devon, which are now in contemplation, they will permit the ground to be pre-occupied, and be obliged, ultimately, to submit to such terms as strangers may chose to impose upon them without deriving any advantage at all equivalent to them.—A CENTRAL MAN: *London, July* 30.

EVIL CONSEQUENCES OF INJUDICIOUS SPECULATION.

[FROM A CORRESPONDENT.]

As we predicted a week ago, the day was near approaching when the jobbing system, not to use a more harsh term, of a few of the newly-forming railways would be exposed, not only in Parliament, but out of the sanctuary of St. Stephen's, which is not very renowned either for its honesty or impartiality, much less to say wisdom. That the railway mania has been carried too far in this country, every sensible person is fully convinced of, as also of the evils that will ultimately arise, and ruin to thousands, if a check is not timely put to one of the most alluring speculations for the holder of a little ready money to embark with. The solons of the House of Lords have, at the eleventh hour, opened their eyes from the yellow steam or smoke that obscured them, and the *honourable* members of the lower House, not willing that "Cæsar should lose his good name," have blushed, if such a thing is possible, at their own money-making allurements. In the House of Lords, on Tuesday night, the adjourned debate on the Dublin and Galway Railway Bill was resumed, the *chicanerie* of which has already been well exposed to the public. The Earl of Bessborough was for deferring any further consideration of the bill till that day three months. The Marquis of Clanricarde, however, "could not conceive why the noble Earl had fixed upon this particular bill as the object of his enmity. Systematic frauds had, it was true, been perpetrated, not by the directors, but upon them. The directors of other railways had been the victims of the same frauds, and yet their bills had been passed, while this was to be delayed. He could not believe that the House would stop the bill, which, in his opinion, ought to be re-committed." The noble Marquis sat after these expressions very demure, and full of anxiety, confident that his forcible reasoning and eloquence would confound the opposers to this nefarious transaction; but we are happy to see that the Peers of this realm have some little judgment of their own, and can discern honesty from the most disgraceful imposition of railway jobbers and designing lawyers. The Dukes of Wellington and Cleveland, the Earls Wicklow, Bathurst, and many other noble Lords, strongly censured the whole affair, and the bill was thrown out of the House by a majority of twenty-seven. In the Commons, an amendment of the Standing Orders has been passed, raising the deposit on the shares from 5 to 10 per cent. This is one of the most extraordinary "wheelabouts" of the present session, just a fortnight before the senatorial duties of these sporting gentlemen will be closed. They have allowed the system to be unopposed, and all the evils incurred that can be in the schemes of this year; but, just before retiring, they are conscious struck, like Judas, of the ruin that will be inevitable to many a honest and deserving tradesman, who has been inveigled to speculate in railway transactions. The day of reckoning must come—and the expenses that have been incurred in the committees of both Houses of Parliament during the present session, and out of the sanctuary of Westminster, by lawyers, witnesses, &c., will bear hard upon the deluded scripholders, many of whom, it is to be feared, will see their names figuring in the *Gazette*.

Electric Telegraphs are being established on all the lines throughout France that are finished—viz., from Paris to Versailles and St. Germain, ditto to Rouen, to be extended to Havre and Dieppe, ditto to Orleans, &c. His Majesty Louis Philippe is so pleased with this invention, or discovery, of Professor Wheatstone, who has introduced the electric telegraph on the greater part of the lines in England, that extensive contracts have been made with that scientific gentleman for erecting them from one end of France to the other, as the various railways are finished—viz., from Calais, Boulogne, Amiens to Paris, Havre, Bordeaux, and the south to Montpellier, Nismes, Marseilles, Avignon, Lyons, Strasbourg, and the east, thereby having the facility of communicating with the interior and the frontiers of Spain, Switzerland, Germany, and Belgium, and all the important sea-ports and royal arsenals of Brest, Cherbourg, Rochfort, La Rochelle, Bayonne, Toulon, &c. The electric telegraph will, in a few years hence, entirely supersede the present system of semaphores, not only from its simplicity, but the facilities it offers to Government for communicating their despatches, and receiving information of all that is passing in the interior, the frontiers, and outports, as it can be worked by night as well as by day, in fine weather, rain, snow, or foggy, without interruption, whilst the ordinary telegraph can only be worked by day, and that when a clear atmosphere prevails.

AMERICAN LOCOMOTIVES.—Some interest having been excited respecting a paragraph which appeared in the *Mining Journal* of the 19th ult., we are glad to be able to give some additional particulars of a most powerful locomotive engine intended for the Long Island Railway, and manufactured by Messrs. Norris, of Philadelphia: it has already caused considerable interest and admiration in America, and is intended to carry 300 passengers and the United States mail from Brooklyn to Greenport, ninety-seven miles, in two and a half hours, although it is understood it could on an emergency do it easily in two hours, which would be at the rate of forty-seven miles per hour. The plan upon which this engine is constructed is entirely new; the driving-wheels are five and a half feet in diameter, bearing five-sixths of the weight—while immediately behind them are a pair of small railway wheels, bearing the remaining sixth; the tender has four common wheels, the body moving freely on a pivot to assimilate itself to any change of position; the small bearing wheels are not geared to the driving-wheels. It has a 10½-inch cylinder, with a 20-inch stroke, and weighs fourteen tons.

BLACKWALL RAILWAY—PROPOSED EXTENSION THROUGH SOUTH ESSEX, AND TO HUNGERFORD MARKET.

At the special general meeting of the proprietors in this company, held on Tuesday last, much information was elicited, which places its future prospects in a very different and far better light than affairs have, from its formation to within comparatively a few months, allowed parties to hope for. The report of the directors congratulated the proprietors on the improved and improving state of affairs. It was true, they had lost their Epping Bill for the present session, but satisfactory arrangements had been made with the Eastern Counties Company for extending a branch from the Stepney station to join that line at Old Ford, and a bill would be applied for next session for a continuation to Epping, should such be determined upon; the bill for the Old Ford branch had already been read a first time, and it was hoped it would receive the Royal Assent in the present session; the capital required would be 200,000*l.*, in 8000 shares, divisible among the Blackwall railway proprietors. The report was quite unanimously agreed to.

The CHAIRMAN (Mr. Daniell) observed, that, although the bill was obtained, and they would be in a position to commence the works, there was yet much to settle with the Eastern Counties Company; he considered this extension, and that to Epping, was only the commencement of a grand and comprehensive scheme of the utmost future value to the Blackwall proprietors; he hoped he was not too sanguine when he expressed his belief that they would eventually form a grand link in the chain of railways—not only of the eastern and north-eastern, but of the northern counties of this great empire. It was acknowledged they had the most convenient and central terminus for the city, and, by the proposed extension (by embanking the Thames to Hungerford), they should give equal accommodation to the west end.

A resolution was then read, expressive of the entire approbation of the meeting of the proposed extension to Epping, and their full consent to proceed with the branch to Old Ford.

Dr. BOWRING, in seconding the resolution, expressed the great pleasure he felt in the improved prospects of the company, and believed the Blackwall Railway would eventually become one of the greatest trunk lines in the kingdom; he admired the good feeling which had marked the proceedings of the directors in their arduous struggle to clear the company from the incubus which weighed upon them, for, without perseverance and unanimity, they never could have succeeded.—The resolution was unanimously adopted.

In connection with this subject, and forming a most important extension of the Blackwall Railway, is a line (which has been provisionally registered, and a prospectus of which we have before us) for supplying South Essex with railway communication—commencing at the Stepney station of the Blackwall Railway, proceeding by Bromley, Plaistow, West and East Ham, Barking, Dagenham, North Ockendon, Bulvan, Basilden, Hockley, Fambridge, to Burnham, on the Crouch river—with one branch, leaving the line between Barking and Dagenham for Tilbury, with a ferry to Gravesend, and another from Hockley to Southend. It will also, at Ockendon, meet the Thames Haven line, for the carrying out of which long protracted scheme, efficient arrangements are in progress. From the data already laid before the provisional committee, and from the level nature of the country through which the line will pass, they have every confidence that, even with existing traffic, it will be a paying line, but the River Crouch being already accessible for ships of large burden, and forming a safe and commodious harbour, it is more than probable that, on the completion of the railway, Burnham will become a largely-frequented port, and the traffic which will be brought by that means, of course, flow along this line, bringing it into the very heart of the city; the branches to Gravesend, *via* Tilbury, and to Southend, must also prove of immense importance—shortening the distance by many miles. For the completion of the main line, about thirty-six miles, and branches eighteen miles, the whole capital required is 900,000*l.*, or under 17,000*l.* per mile. Such a line would, doubtless, vastly improve the entire district of South Essex—add considerably to its population and resources, and, consequently, to the returns for the capital expended on it.

LYNN AND ELY RAILWAY COMPANY.—The first meeting after the passing of the Act of Parliament for the formation of this line, was held at the London Tavern, on Tuesday, the 29th ult.—Sir W. J. H. BROWNE FOLKES, Bart., in the chair.—The advertisement convening the meeting having been read, the CHAIRMAN observed, that this was the first meeting of the proprietors since the passing of the Act, which was imperative as to its being held within one month from its receiving the Royal Assent. It would have been more convenient for the directors if more time had been allowed, as it would have enabled them to lay before the meeting a more elaborate report; the one which the secretary would now read was necessarily short, but it was all the information they had to communicate.—The report was read, which stated that the Royal Assent was obtained on the 30th of June last, being in the first list of railway bills which passed. The formation of the line from Lynn to Ely, with a branch to the important and thriving town of Wisbeach, would now be proceeded with, and every effort would be made for its completion at the earliest possible period, consistent with safety and economy. Their connection with the Ely and Huntingdon, and Lynn and Dereham lines would be productive of mutual good; by the latter the whole of the traffic of West Norfolk and London would pass over their line, and it was probable it would be found that the union of the three lines at a future day, under one management, would be found desirable.—The report was unanimously adopted, and it was stated that the first half-yearly meeting would be held in February next, when the directors hoped to be in a situation to give a favourable report on the progress of the line. It is expected to be opened in about twelve months.—The capital for the projected main line was originally 200,000*l.*, in 8000 shares, with a station about a mile out of Lynn, when it was considered expedient to form a branch to Wisbeach, and remove the station into the town; this required an addition of 50 per cent. to the capital, which was effected by the issue of 4000 shares, divided *pro rata* among the shareholders, and the whole of which were so taken.—A proposal was made for the remuneration of the directors, but which was postponed until the next meeting.—Mr. Bruce (of Mincing-lane, London), and Mr. Self (of Lynn), were elected the first auditors; and, after a vote of thanks to the chairman and directors, the meeting broke up.

The first general meeting of the new Ely and Huntingdon Railway was held at the London Tavern, on Wednesday last, H. C. LACEY in the chair; there was but a small attendance of shareholders present. The CHAIRMAN took this opportunity of informing them who their directors were, so that there should be no untoward misunderstanding on either side. The report of the directors having been read and adopted, a SHAREHOLDER wished to know the length of the proposed line, which was stated to be twenty-two miles.—The seal of the company was afterwards affixed to the register of proprietors, and a vote of thanks passed to the chairman and directors, the meeting separated, highly pleased with the prospects of this new undertaking.

The first general meeting of the London and Dunstable Company was held at Euston-square station, on Wednesday last, Mr. G. STEPHENSON (the engineer) took the chair, but, as a sufficient number of shareholders did not attend to constitute—in conformity with the Act—a legal meeting, a month's adjournment to the 27th of August, was determined on. He took the opportunity, however, of stating that the proprietors would receive 4½ per cent. dividend, guaranteed by the London and Birmingham, who would lease and make the line.

A meeting of the Lowestoft Railway and Harbour was held on Wednesday, at their office, Guildhall-buildings, F. MEREDITH, Esq., in the chair, so as to comply with the Act of Parliament.—The CHAIRMAN stated that the arrangements between them and the Norfolk Railway Company will be announced at a special general meeting, which will be held as soon as possible.

The half-yearly meeting of the Liverpool and Manchester Railway Company was held at Liverpool on Wednesday. The report stated that the receipts from passengers had greatly increased, owing to the cheap trains and the reduction of fares. The total receipts amounted to 134,124*l.*; the total expenditure to 65,610*l.* A dividend of 5 per cent. for the half-year was declared, and a balance of 10,468*l.* carried to the next half-year's account.

The adjourned half-yearly general meeting of the shareholders in the Chester and Birkenhead Company was held at Liverpool, on Thursday, for the purpose of declaring a dividend of 13*s.* per 50*l.* and 6*s.* 6*d.* per 25*l.* share, which was unanimously carried. The meeting then adjourned till Wednesday next.

At a special general meeting of the South-Eastern Railway, held at the London terminus, on Saturday last, "for the purpose of taking into consideration the provisions of a bill now before Parliament, under which it is proposed to enable this company to accept as a transfer of the powers proposed to be given to the Brighton, Lewes, and Hastings Railway Company, under such bill of making a line from Ashford, to join a projected extension of the said Brighton, Lewes, and Hastings Railway, near Bulverhithe, in the county of Sussex," the CHAIRMAN (Sir John Kirkland) gave a most satisfactory account of the arrangements that have been made by the directors for carrying out this new addition to their company, which gave general satisfaction: by this new arrangement the company will get back about 50,000*l.*, and also be exonerated from the further claim of 17,000*l.*—making a total of nearly 70,000*l.* A very advantageous understanding has been entered into with the Brighton Company for the use of their station at Croydon, for the trains of the South-Eastern Co.

It was agreed, on Friday week, at a meeting of the North Kent Railway, at the London Tavern, Sir I. L. GOLDSMID in the chair, to proceed with this undertaking next year. To complete this scheme a capital of 3,300,000*l.* will be required. A statement of the preliminary expenses was laid before the meeting.

PARIS AND LYONS RAILWAY.—We believe we may announce to our readers, that the capital of Calon's Company has been completed, and subscribed, so as to enable it in every respect to tender for the Paris and Lyons Railway, according to the conditions of the law. The number of French directors has been increased.—*Journal des Chemins de Fer, July* 26.

KOLLMANN'S IMPROVEMENTS IN LOCOMOTION.—Since the first establishment of the company for carrying into operation the above improvements for safety and facility in locomotive travelling, some important alterations have been completed, by which the value of the patent is much increased; in addition to the facility with which the carriages of a train on this plan assimilate themselves to the nature of any curves they may run over, thus preventing the danger of running off the rails by the centrifugal force, and the absolute safety of the horizontal driving-wheels beneath the carriage, a plan is now matured, and for which patents have been secured, for the application of the combined system to propulsion on canals, and which will, we are informed, enable them, in a great measure, to compete with their rivals—the railways. Notwithstanding a good-sized model is worked daily at the Adelaide Gallery, it is the intention of the directors, with the full consent of the shareholders, to lay down a full-sized working railway at a convenient distance from London, with curves and gradients which have hitherto been considered impracticable, in order to give a full and fair opportunity of the system being appreciated in public estimation, and on the result of which they have the most perfect confidence.

SIR WILLIAM BURNETT'S PATENT FOR THE PREPARATION OF WOOD, CANVAS, &c.—The company formed for carrying out Sir William Burnett's patent for the preparation of canvas, cordage, timber, soldiers' clothing, with woollen, cotton, and linen fabrics of every description, for the prevention of mildew, dry-rot, &c., appears to be progressing in a very satisfactory manner. We have been favoured with an inspection of the works at Millwall, which are capable of carrying on a very extensive business. The cylinder for the preparation of timber is fifty feet in length, and six feet in diameter. The air pumps, steam-engines, and hydraulic pumps for forming the vacuum, and injecting the solution, are all of the very best description; the engine, which is of 4-horse power, is a perfect model, and works with the greatest ease and absence of noise and vibration. The following is a description of the process:—The cylinder, which will contain twenty loads of timber, but in which from seventeen to eighteen loads are generally placed, being filled, the manhole is secured, and the air pumped out until the mercury stands at 26½ or 27 inches; the valve connecting the air pump with the cylinder is then closed, and one being opened connecting it with a tank of the solution, the liquid, of course, rushes in until the cylinder is nearly filled; an hydraulic press of great power is then worked by hand until the weighted guage indicates a pressure of 150 lbs. to the inch; this is thought sufficient, although it can be worked to 200 lbs. The pores of the wood become filled with a semi-metalliferous substance, rendering it quite unaffected by those atmospheric and other changes which cause mildew, decay, &c.; eighteen loads of timber will imbibe 1400 gallons of the solution. For the preparation of sail cloth, canvas, &c., it is merely necessary to place the substance in tanks of the solution for about forty-eight hours, when, however close the fabric, the capillary attraction will have sufficiently saturated the material, which is then hung up to dry. One great advantage of the process for cotton and linen goods is the bleaching effect which it has on them, rendering them far more white and elegant in their appearance than before the operation. Cambrics and muslins having been thus prepared, become incombustible, and would be well worthy the attention of ladies, in making up muslin and other light dresses—particularly for children, as it would thus infallibly prevent those dreadful accidents, from clothes catching fire, which so often happen, while the beauty of the fabric is preserved. In the saturation of the finest wove woollen cloths, in the most delicate colours, azure blue, straw-coloured kerseymeres, and the finest regimental scarlets, we find the same absence of any detrimental change, while the fabric is proof against moth, mildew, and decay. One particular feature in the application of the chloride of zinc to the preservation of timber, is the apparent chemical affinity it has for the sap. A curious experiment has within these few days been made, the results of which are of a highly important nature:—Three young saplings of oak, ash, and beach, about three inches diameter, at the thickest part near the root, taken from plantations during last month, and, consequently, full of sap, were each cut into four pieces, two alternate pieces of each prepared in the solution, while the other two were left in their natural state; they have now been done five days and begin to dry, and it is evident, the injection of the zinc has formed a chemical combination with the sap, forming a new compound, and rendering the whole indestructible; while the wood of a young sapling, it is well known, will not remain sound a year. These interesting specimens may now be seen at the office [*see* advertisement]. The length of time which has elapsed since the first experiments were tried, is sufficient to prove the success of the plan, and daily experience adds to the confidence placed in it.

LONDON, WARWICK, LEAMINGTON, AND KIDDERMINSTER RAILWAY.—This line of railway, which is intended to form a short and direct line between the above places—shortening the distance between Kidderminster and London ten miles, and between London and Warwick, or Leamington, above twelve miles—will commence at Kidderminster, by a junction with the Worcester and Wolverhampton Railway, and proceed by Bromsgrove, Feckenham, Alcester, Studley, Redditch, Henley, Warwick, Leamington, Southam, and Daventry, to Weedon, where it will join the London and Birmingham line. Its route through towns so densely populated, and from whence the produce of so many extensive manufactories are transmitted to all parts of the kingdom, must secure a large traffic both in passengers and goods. The saving in distance between its terminus at Weedon, and places on its route, will be much greater than those above-named with London—for instance, it will save twelve and a half miles between Weedon, Warwick, and Leamington, as also between Weedon and Henley; twenty-four and a half miles between Weedon and Redditch; fourteen and a half miles between Weedon and Bromsgrove; and fifteen miles from Weedon to Kidderminster—while from Daventry to Warwick and Leamington, which, by the present line is thirty-seven and a half miles, will be by this route only seventeen miles, thus causing a saving of twenty miles. It will form the most direct route to South Staffordshire, the Potteries, and the great salt districts, and the north-western counties. The absence of any other line or canal in this district, and the favourable nature of the country through which it runs for its construction, will render an ample return to the shareholders. Its length will be 53 miles, and the capital to be raised is 900,000*l.*

OXFORD, WITNEY, CHELTENHAM, AND GLOUCESTER INDEPENDENT RAILWAY.—This company, which we have before noticed in our columns, and which is formed for the purpose of opening a short and direct communication between London, Oxford, Cheltenham, and Gloucester, is progressing favourably in public estimation; and, from being one of the routes which the Board of Trade pointed out in their report of March last, the importance of the districts through which it will pass, and the absence of all engineering difficulties in its construction, it is confidently anticipated it will receive the sanction of Parliament, as the landowners on the route are generally favourable. To Witney and its neighbourhood, this railway will prove of extreme value, by rendering coals at less than half the price at which they can at present be obtained, and thus introduce steam power into the factories, as well as render this necessary of life accessible to all. This railway will considerably shorten the distance from Cheltenham to London, and, from the populous character of its route, must become a paying line.

NORTH DEVON RAILWAY COMPANY.—This company is formed for the purpose of carrying out a comprehensive scheme of railway communication, not only in the *northern* parts of Devonshire, as its name would imply, but from Barnstaple and Bideford north to Taunton, and Tiverton eastward, and south to Exeter and Plymouth—the whole being in length about 120 miles, and taking in their route the towns of South Molton, Wiveliscomb, Milverton, Crediton, Okehampton, Hatherleigh, &c., embracing some of the richest agricultural districts in the counties of Somerset and Devon, and accommodating the greatest part of the population of the latter county in particular, which, at the last census, exceeded 530,000 persons. This projected plan will unite the Bristol and English Channels, and thus open ports of shipment at each extremity—a feature of considerable importance, by which the agricultural produce of the interior will find cheap and rapid transit for transportation to all parts of England—while the large mineral produce of South Wales, for shipment at the southern ports of England, must find their way over this line, and produce a return which will, doubtless, pay to the shareholders a good remunerative dividend. Already does the romantic scenery of Devonshire, and its salubrious climate, attract a vast number of persons from distant parts of the kingdom annually, and when the accommodation and economy in travelling which these lines will afford is placed within reach of the community, their numbers, it is certain, will be much increased. The provisional committee is composed of the most influential noblemen, gentlemen, and large landed proprietors of the counties. A general inspection of the country has been made, which clearly demonstrates the practicability of the formation of the railway within a perfectly reasonable cost, and more detailed surveys are now being made, that the utmost security may be had that no engineering difficulties will require an augmentation of the capital proposed, which is 1,700,000*l.*, in 70,000 shares of 25*l.* each. The promoters of the North Devon, Crediton, and Barnstaple line have united with this company, and the Great Western, Bristol and Exeter, and South Devon Companies, are to find one-half the capital, and join in the direction of its affairs.

GRAND JUNCTION RAILWAY.—The annual meeting of this company was held at Liverpool, yesterday.—Mr. JOHN MOSS took the chair.—The report, which was very long, stated that the net profits on the half-year had been 129,689*l.* 6s. 6d., and a dividend of 5*l.* was recommended and carried.—The CHAIRMAN, in moving the adoption of the report, announced his intention of resigning his office as chairman of the directors, but not his seat at the board, in consequence of his declining health, and he congratulated the shareholders upon the prosperity to which the concern had attained.—The proceedings terminated by a resolution being carried, highly eulogistic of Mr. Moss's services.

NORTH UNION RAILWAY.—A special general meeting of proprietors was held at the station, Preston, on Thursday, the 31st ult., when a dividend of 4*l.* per cent. on stock A, and 2*l.* per cent. on stock B, was declared, the report and accounts were unanimously adopted, and thanks passed to the directors.

HUDDERSFIELD AND SHEFFIELD JUNCTION RAILWAY.—The first meeting of shareholders since this company obtained the sanction of the legislature, was held in the Town Hall, Huddersfield, on Thursday, 31st ult., when from the report it appeared that the deposits paid up, with banker's interest, amounted to 31,176*l.* 14s.; and the expenses incurred, 7857*l.* 10s. 2d.—leaving a balance in banker's hands of 23,319*l.* 4s. It was understood the line will be opened in two years and a half; the report was unanimously adopted.

PARIS AND ROUEN RAILWAY.—On Thursday, the half-yearly meeting was held at Paris, when it was announced that the gross receipts for the nine months were 4,718,388 f.; expenditure, 2,752,466 f.; profit, 1,965,919 f.; affording a dividend of 23 f. 10 c. per share, payable on the 9th of August.

LEEDS, DEWSBURY, AND MANCHESTER RAILWAY.—The first general meeting of the proprietors was held on Wednesday last, at Leeds, T. GOTT, Esq., in the chair.—Mr. JOHN ATKINSON (one of the solicitors) read the report, stating that the directors had already let the principal contract for the works, including the Summit Tunnel, within the Parliamentary estimate. The directors had abandoned that part of the line which runs nearly parallel with the Manchester and Leeds, from Dewsbury to Cooper's Bridge, and the effecting instead a junction with the latter line near the Dewsbury station—the Manchester and Leeds giving to this company an uninterrupted use of their line. The passing of these three bills will secure a new communication from north-east to south-west, which will be highly beneficial to the trade of the district.

ROYAL BANK OF AUSTRALIA.—At a general meeting of the proprietors in this bank, held at the offices, 2, Moorgate-street, on Wednesday last, the 30th ult., J. W. SUTHERLAND, Esq. (vice-chairman), in the chair, Mr. WRAY (the manager) having read the advertisement convening the meeting, the CHAIRMAN alluded to the distressed state of the colony on the first establishment of the bank, and the cheering prospects which were now before them.—A short report of the directors was then read, and from the statement of accounts, it appeared that, after paying regularly the dividends on the capital of 5 per cent. per annum, and all expenses in the colonies and at home, there was a sum of undivided profits of 26,873*l.* 9s. 8d.; out of this it was intended to devote 20,000*l.* to pay off the loan notes which would shortly become due, and 500*l* to the preliminary expense fund.—The report and accounts were then adopted, and ordered to be printed; and votes of thanks were severally passed to the chairman, vice-chairman, and directors, as well as to the manager.—Adam Duff, John Mitchell, and John Connell, Esqs., were re-elected directors, and the meeting separated highly gratified.

A LONG YARN.—A rope has just been manufactured by Mr. T. Briggs, of Richmond Hill Ropery, Salford, 4347 yards (nearly 2½ miles) in length, and weighing above 2 tons; it is without a splice, and intended for the new works of the Theatre Royal, Manchester. A little bit of *badinage* is going on between the *Manchester Guardian* and *Gateshead Observer*, as to whether Salford or the latter place has yet produced the longest rope. It appears, however, that the last *long yarn* spun at Gateshead was three miles long, and weighed 3 tons.

The extensive plate and crown glass works at South Shields and Newcastle, belonging to Messrs. Cookson, have been purchased by George Hudson, Esq., the successful railway projector, who is joined in the undertaking by Mr. Hutt, M.P. for Gateshead, and several other gentlemen of considerable influence in this distaict.—*Durham Advertiser.*

THE STEAM NAVY OF FRANCE.—An official return has been published of the number of steam-vessels belonging to the Royal navy of France, from which it appears, there are seven frigates of 540-horse power, carrying from sixteen to twenty guns each; steam corvettes, seventeen of 220 to 320-horse power, from six to twenty guns each; second-rate steamers, forty-four, varying from 50 to 100-horse power, and four to six guns each. From the above, it will be seen that the French Government is trying all it can to compete with the British navy. The *Moniteur Industriel* makes some very pointed remarks on this subject:—"The building of steam-vessels has never been considered by our Government worthy of their special notice, and they have been obliged to resort to England for their machinery, instead of having foundries of their own. The vessels that we have are badly constructed, as no encouragement has been given to this branch of science, so that in case of a war, which is not likely, we could not compete on the seas with Great Britain. The best steamers we have are built by private individuals and men of science; but the Government thinks, in giving to youth a smattering of Latin, they are capable of performing the work of our most experienced engineers. We have every necessary requisite, abounding, as we do, with mines of every description, but still England will always have the advantage over us, as long as the present Government will not attend to the welfare of our steam navy."

MEETINGS OF PUBLIC COMPANIES DURING THE WEEK.

TUESDAY.—Southampton Docks Company, at One—Brighton and Chichester Railway Company, at One—Leeds and Bradford Railway, at One—North Midland Railway, at Twelve—Newcastle and Darlington Railway, at One.

WEDNESDAY—Leicester and Swannington Railway, at One—Chester and Birkenhead Railway Company, at Twelve.

THURSDAY.—London and County Bank, at One—London and Birmingham Railway, at Twelve—London and Brighton Railway, at One—Reversionary Interest Society, at Twelve.

FRIDAY.—Hibernian Mining Company, at One.

THE METAL TRADE—*(Continued from the Last Page).*

(From our Correspondent.)

IRON.—The demand for Welsh and Staffordshire continues dull, and for Scotch pigs there is very little inquiry; at a meeting of the masters at Glasgow, on the 30th ult., they reduced their price from 80s. to 65s. net four months, or 2½ per cent. for prompt delivery. For Swedish iron and steel there is an improved demand.

COPPER—Continues in fair demand, and our quotations well maintained.

TIN.—The price of English is firm, and in foreign there is more doing, the price in Holland having advanced.

TIN PLATES—Rather lower, but there is a fair business doing at quotations.

LEAD—Not quite so buoyant as a few weeks ago, but there is a fair demand, and no foreign either here or in Liverpool.

SPELTER—Very few sales recently; some holders will not sell under £24 10s.

(Communicated by Messrs. Whitcomb and Barton, Old Broad-street.)

English bar-iron has been in rather better request this week, at a trifle under our quotations. In Scotch nothing doing; the makers have again reduced their price to 65s., less 2½ per cent. discount for cash. In rails some large transactions have taken place for delivery next year, at prices varying from 9*l.* to 9*l.* 10s. per ton.—English copper continues in good demand for home use, as also English lead.—Tin plates are lower, and very little business doing.—In other metals nothing to remark.

INDIAN METAL MARKET.—*By the Overland Mail.*

BOMBAY.—But little business has been done in any description of metals since our last.—Copper sheathing, braziers' bottoms, and tiles, have all declined in price.—In iron there has been no transactions of any kind, and prices are nominal.—Lead dull of sale, and lower in price.—Spelter, steel, quicksilver, and tin plates, are each without alteration.

CALCUTTA.—A few sales have been effected in copper at about our last quotations, but dealers have not appeared in the market, and there is no general demand.—We still hear of a few speculative transactions in iron, which have the effect of maintaining prices, which would otherwise be quite nominal, as the native merchants show no disposition to purchase.—Several sales have been effected in spelter at rather advanced rates, notwithstanding the heavy stocks.—In lead and tin plates, we are not aware of any sales, but tin plates have engaged more attention, and are held at somewhat higher rates.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver coin to Fernando Po.....£150

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending July 26, was 22,542; amount of money, 93*l.* 18s. 6d.—(Last year, 120*l.* 13s. 1d.)

COAL MARKET, LONDON.

MONDAY.—Price of coals per ton at the close of the market:—Buddle's West Hartley, 15 6—Chester Main 14 9—Hasting's Hartley 15—Holywell Main 15—Original Tanfield 13 6—Old Pontop 13 6—Ord's Redheugh 13—Ravensworth West Hartley 15—Stewart's Steam 14 6—Taylor's West Hartley 15—Tanfield Moor 16—Townley 14—Wall's End Hilda 16 3—Killingworth 15 9—Walker 16—Wharncliffe 16 3—Braddyll's Hetton 17 9—East Hetton 16 3—Haswell 18—Hetton 17 9—Russell's Hetton 17—Stewart's 17 9—Hartlepool 17 9—Heugh Hall 16 9—Kelloe 17 to 17 3—Adelaide 17—Adelaide Tees 17 3—Hartley 14 9—Eden Hartlepool Cinders 23.—Ships arrived, 27.

WEDNESDAY.—Adair's Main 13 6—Hastings' Hartley 15 6—Holywell Main 15—Nelson's West Hartley 15 3—New Tanfield 14—Old Pontop 13 6—Tanfield Moor 16—West Wylam 14 9—Wylam 14 3—Wall's End Riddell's 16 9—Eden Main 16 3—Hetton 17 9—Lambton—17 3—Russell's Hetton 17—Stewart's 17 6 Caradoc 17—Heugh Hall 17—Kelloe 16 9 to 17—Seymour Tees 17—West Tees 16—Bryndwy 21 6—Craigola 21 6.—Ships arrived, 45.

FRIDAY.—Hastings' Hartley 15 3—Nelson's West Hartley 15—New Tanfield 13 6—Original Tanfield 13 6—Ord's Redheugh 13—Pontop Windsor 14—Ravensworth's West Hartley 15—Tanfield Moor 16—West Hartley 15 9—West Wylam 14 6—Wylam 14 3—Wall's End Bewicke and Co. 17—Killingworth 15 9—Wharncliffe 16 3—Eden Main 16 3—Braddyll's Hetton 17 9—East Hetton 16 3—Hetton 17 9—Lambton 17 6—Pemberton 16 6—Russell's Hetton 17—Stewart's 17 9—Hartlepool 18—Heugh Hall 17—Kelloe 17 3—South Kelloe 17 3—Brown's Deanery 16 9—Evenwood 15—Maclean's Tees 16—Richardson's Tees 16—Tees 17 3—West Tees 16—Hartley 15—Eden Hartlepool Cinders 22 6.—Ships arrived, 67.

A YOUNG MAN, the author of several works and papers on Chemistry and Mineralogy, wishes to OBTAIN A SITUATION, with a moderate salary, at a MINE, or on any MINING WORKS, at home or abroad; he speaks French, and has a slight knowledge of the Spanish language, and is well acquainted with the methods of assaying and analysing ores, furnace products, &c., as well as with levelling, surveying, and general engineering operations.—Address (free) to "A. Z.," care of Messrs. Chapman, 9, St. James's-street, Piccadilly, London. 2*l.*

NOTICES TO CORRESPONDENTS.

T. Hall (Castleton).—The apparent anomaly our correspondent notices may often happen; there is, perhaps, no reason "why it should be so," but it is attributable to the usual fluctuations of trade.

MERIONETH UNITED MINES.—We will give the desired information in our next.

Mr. Hunt.—There are works in *Wales* for smelting sulphuret of zinc—Messrs. Williams and Co., of Swansea, and Messrs. Crockford, of Holywell, Flintshire; we believe there are none in England.

ERRATA.—In Mr. Craddock's paper on Boiler Explosions, in the Journal on the 5th July, page 335, column 2, nine lines from bottom, *for* 52 lbs. *read* 59. In a similar communication, in last Journal, referring to Savory's engine, should read "these principles were dimly seen," &c., *not* "directly seen," &c.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, AUGUST 2, 1845.

We laid before our readers last week the annual statement of the produce of the British and foreign mines, comprising the sales of copper ores in the past year, both in Cornwall and at Swansea, by which it will be seen what has been the produce of most of the foreign and home mines, severally and in the aggregate. This will be found valuable and interesting, as affording a facility of reference on an important subject, often alluded to without correct data. There is one novelty in the list, to which we have to draw especial notice, as it may lead to considerable alterations in the importation and sales account. We refer to the first lot of Australian ores, sold at 9*l.* 7s. per ton, and from the reports touching the mines in this new country, it is not impossible that the mines, both of copper and lead, may produce such quantities of metal, as may lead to results of some importance to the home mines. Among the sales from Cornish mines, we find the principal to be the United, which have yielded in twelve months, 13,789 tons at 5*l.* per ton—69,000*l.* The Consols, 9283 tons, at 5*l.* 8s.—50,000*l.* Fowey Consols, 9809 tons, at 5*l.* 1s. 6d.—50,000*l.* East Wheal Crofty, 6581 tons, at 5*l.* 14s.—37,500*l.* Great Wheal Maria, 4144 tons, at 10*l.* 3s.—42,031*l.* 2s. 6d. (this quantity, we believe, was raised in less than six months). Carn Brea Mines, 6609 tons, at 5*l.* 4s.—34,331*l.* South Caradon, 4331 tons, at 5*l.* 16s.—25,150*l.* West Caradon, 4167 tons, at 7*l.* 4s.—30,000*l.*; which, with the several smaller mines, amount to 157,000 tons, yielding 835,350*l.* Among the foreign mines, we find the Cobre alone yielding 18,782 tons, at 11*l.* 9s.—215,196*l.*, being equal to four of the best mines in the county of Cornwall—viz., the United, the Consols, the Fowey Consols, and the Carn Brea, or to one quarter of the whole sales. The Santiago Mines yielded in the same period 5949 tons, at 14*l.* 8s. 6d.—85,678*l.* The Chilian Mines, not being particularised, 7126 tons, at 23*l.* 11s. per ton—amounting to 168,000*l.*; or, for the whole of the foreign mines, 598,241*l.*, being nearly three-fourths of the sales of all the Cornish mines. The Irish mines, including Knockmahon, 7634 tons, at 6*l.* 10s. 6d.—49,767*l.*, have yielded nearly 80,000*l.* It will, we conceive, be hardly possible to look at these facts and figures, without feeling the conviction, that such large importations of foreign ore must, without a protecting duty, materially affect the produce of our home mines. We had intended this week to have enlarged upon this subject; we reserve it, however, for a future occasion, merely at present calling the attention of our readers to the figures which we have placed before them.

The coal trade (port of London) bill was read a second time in the House of Lords, on Thursday, and before our next, will, doubtless, have received the Royal Assent. The Marquis of LONDONDERRY has perseveringly opposed its progress, contending that the author of the bill knew nothing of the subject, and that the tax would fall directly upon the coalowner, who was already so oppressed that, unless some remedial measures were introduced, extensive ruin must ensue. Coal (said his Lordship) was almost the only article imported into the port of London that was so grievously taxed. In 1840 the City of London gave up the coal tax to the Government: the annual revenue in that year was 125,000*l.*, in 1841 it increased by 20,000*l.*, in 1842 by 10,000*l.*, and in 1843 by 5000*l.*: in 1844 there was a strike amongst the colliers, and the revenue decreased by 3500*l.*; for the half of the present year, however, it had increased so as to make the average 165,000*l.* from the present tax. As there had been so great an increase, and that likely to continue, why is it necessary to put a tax of an additional penny on this necessary of life?—and why, too, are coals alone to be taxed for metropolitan improvements? On the other hand, it is considered the proposed improvements in London and its vicinity, which are to be effected by means of this tax, will prove generally beneficial,

The consideration of the circumstances affecting that staple commodity of so large a portion of the kingdom—*iron*—is always of immense importance, and becomes particularly more so at the present time, when its useful application in the arts is daily being vastly extended. In addition to the immense demand for sheet-iron for the purposes of shipbuilding all round our coasts, its application to smaller articles of commerce for domestic and agricultural uses consumes a vast quantity, but the greatest increase in the future demand for iron will be for railways, both here and on the continent. In this country alone, the numerous gigantic undertakings which have already received the Royal Assent, are estimated at 1800 miles, and it is probable before the approaching prorogation, legal powers will have been given for the construction of *two thousand three hundred miles of railway*, the majority of which being double lines, we may take in round numbers at 8000 miles of rails, to which must be added chains, bolts, sleeper iron, extra lines and machinery at stations, besides what is required for the working stock, which will, of course, be put in hand to be ready on the completion of the lines, creating at least a demand for railway iron, amounting to 1,200,000 tons, which will be required in the next two years, without reckoning a single pound for foreign demand—while, notwithstanding the extension of the number of furnaces in Belgium, France, and other parts of Europe, or the "go-a-head" style in producing iron, which the Americans are attempting, it is certain that a large demand for iron in England will arise from the foreign railway schemes, many of which have already broke ground, and all are anxious to begin. For the last three or four months the iron trade has been in a desponding state, declining prices and increasing stocks have continually harassed the manufacturers, and occasional strikes of the men, when an unavoidable decrease in wages was announced, added to the gloom; there is, however, now a prospect of steady demand for iron for many years, the continuance of which much depends on the masters themselves. A regular demand of 12,000 tons per week would employ all the furnaces at present in make, and double their produce. The weekly make of South and North Wales, Staffordshire, Yorkshire, Lancashire, the north of England, and in Scotland, is estimated at 6700 tons per week, and as more furnaces will continually be blown in, and in each session fresh railway schemes will be ready to be proceeded with, a continual and regular weekly make of iron may be depended upon from this source alone for years to come. The question now arises—will this apparently prosperous state of things be of that stable benefit to all concerned in the iron trade, as from the nature of things it ought? We trust it will—it is true, on other occasions of unexpected prosperity, prices have run up to a most unhealthy figure, large fortunes have been made in an incredible short time, only to be lost again on a sudden withdrawal: in the excitement of the receipt of extensive orders, and the securing high prices, additions even as high as 70 to 80 per cent. were made on the workmen's wages, but no sooner was the bubble burst, than an attempt at an equivalent reduction caused strikes and outbreaks, dissipation, and complete idleness. Having thus seriously felt the evils of wide fluctuations in the market, it is to be hoped the masters—and it rests with themselves—will prevent unusual excitement in the trade—let them as a body be content with a *good* profit, and not attempt to grasp a fortune in a day, because that profit *is* good—let them secure to the workmen a fair, nay, even a liberal, return for his toil and danger; and instead of those ruinous changes in price which make trade a game of chance, and which defies calculation, they will secure a very large, and, what is better, a long-foreseen steady return for their capital; it is only under such circumstances the trade can really flourish, and, with a steady determination to pursue such a course under the approaching demand, it must flourish, and that for years to come.

We have before with pleasure remarked on the gradually increasing prosperity of the United Mexican Mining Company, the struggles which for years it had to bear up with, against the most adverse circumstances, and the cheering prospects which have lately seemed to open upon them. We are happy to observe, that these prospects have not been visionary, and that the most sanguine hopes of the entire resuscitation of the association, on a firm and lasting basis, which any of the shareholders may have indulged in, will, in all probability, be realised. It will be remembered, that a special meeting was called by the directors on the 25th June last, to authorise them to pay dividends whenever they had funds in hand for the purpose, when a dividend of 5s. per share was recommended, and that resolutions to this effect were then passed, subject to confirmation at the half-yearly meeting on the 30th ult. This meeting was held on Wednesday last, when the proprietors present were most agreeably surprised to find, that, instead of being required to confirm a 5s. dividend, proposed on a former occasion, they had to consent to the *declaration* of a dividend of 7s. 6d. per share, payable in a fortnight. The chairman stated, that since the meeting of the 25th June, they had *unexpectedly* received a remittance of 20,000 dol., and a bill for 1500*l.*, which enabled them to increase the dividend 50 per cent. It will be remembered at the meeting in question, to empower the directors to pay dividends, whenever they had funds in hand, it was resolved that 5000*l.* should always remain to cover any contingencies which might arise, and this dividend of 7s. 6d. will only leave a sum of 3782*l.*—this, if it appeared likely to be acted on as a precedent, we should highly deprecate, as setting at nought all well-considered regulations for the well-being of a company; but we can appreciate the good feeling of the directors, in being anxious to pay the largest amount possible, under these altered circumstances, to the patient shareholders, and they distinctly state that the 5000*l.* will be immediately made good, and in future remain inviolate. We trust their prosperity may continue to increase, and the proprietors at length receive a return for their long (to them) dormant capital.

We are glad to find from the report of the Copiapo Mining Company, submitted at the general meeting, on Wednesday last, that their affairs are in a more promising state. During the last year, however, they have only received two vessels, bringing together 813 tons of copper ore, averaging 23 to 24½ per cent. of copper, which realised at the rate of 18*l.* 5s. per ton; the ore yielding 24½ per cent. came from the new mine of San Pedro. Notwithstanding the efforts that have been made by the manager of this company at the mines, they were only able to raise 1090 tons of ore during the last year; although from the report it appears there was a stock of about 22,000 tons of copper in the valley of Copiapo on the 17th of April last, which the manager did not think advisable to forward home in consequence of the high freightage at Valparaiso during the latter part of last year. The directors have, however, been most indefatigable on this side the Pacific, to forward the interests of the shareholders in every possible way, and, for that purpose, have engaged three vessels in England at a moderate freightage to bring over the stock on hand in regular succession. There is very little doubt that this company, which has embarked with great spirit in the speculation, will, ultimately, succeed, if their operations are pursued with vigour, while it is certain ruin in being disheartened in their enterprise. The reason of the great failure in the mining operations, undertaken by companies in this country, to work the mines of Mexico, Columbia, Peru, Bolivia, Chili, and Brazils, is that they sent out parties who were not thoroughly acquainted with the country, its inhabitants, nor the language, much less the resources offered by the various mines, excepting by report. The consequence is, that they began working mines that had been exhausted previously by the Spaniards more than half a century ago, and these operations were carried on at immense outlay, and the difficulty of means of conveyance from the mine to the port of embarkation—which everybody knows who has visited either Mexico, or the south—is the most expensive part of the work, either land carriage, or shipment, to England. Until the companies determine upon trying new mines, and not persist in continuing those that have only a name in Spanish mining history, there is very little chance of success in their ever rendering a golden return to the shareholders.

A few weeks ago, all parties interested in the prosperity of the Australian colonies were startled by the announcement, that a bill had been introduced into the House of Lords, by Lord STANLEY, intituled, "An Act to Amend an Act for Regulating the Sale of Waste Land belonging to the Crown, in the Australian Colonies," &c. By that bill it was proposed to give the Governors of South Australia and New Zealand power to reserve, for the use of the Crown, "the whole, or any portion, of the minerals, lying, or being in, or under, any such lands." No measure could have been more injudicious, or worse-timed. While it was unknown that there were minerals in South Australia, the land grants reserved nothing, either above or below the surface; but so soon as the skill and enterprise of the colonists develope the hidden riches found in the bowels of the earth, the Colonial Minister, who ought to encourage and reward that skill and enterprise, attempts to clutch the advantage, and would reserve the minerals, "to and for the use of her MAJESTY." And, as if his Lordship's hands had not been full enough with New Zealand affairs, he must embroil himself, and the Colonial Office, with another class of deserving men, who have meritoriously contributed to extend the power and trade of Great Britain, by colonising waste lands in an antipodal country. Besides, when a mass of bills, some of which had advanced several stages towards enactment, had been abandoned, for sheer want of time—and among these the only bill of his Lordship's own creation this session, "the Landlord and Tenants' Compensation Bill"—it seemed good to his Lordship to originate, *de novo*, the bill above-mentioned, to amend an Act, prepared by his Lordship at the close of the session 1842. With singular haste (quite a contrast to the usual *slow* and *dignified* proceedings of their Lordships) that bill was hurried through the Upper House, and sent to the Commons. On Thursday last it was read a second time, and "committed;" but, happily, the opposition has been so divided, and the folly and injustice of forcing a measure of that importance through the House, without the possibility of due consideration being given to it, so manifest, that the bill has been virtually abandoned, and reduced to one clause—a clause, by the

way, not found in the original bill at all—a clause to regulate the application of money received by the Crown, from sales of waste lands in Van Dieman's Land. A very cool, argumentative, forcible petition to the House of Commons, against the bill, was subscribed by a numerous body of the friends of South Australia, who have taken the opportunity of petitioning for what all these colonies ought to have—a general assembly, chosen by the people, which shall form a component part of the legislative council. Till that constitutional privilege be granted, we shall have constant broils with our colonies. Grant it; and though these may not altogether cease, they will be slight and far between. We congratulate the friends of South Australia, and especially the Australian Mining Company, on the abandonment of the bill; it will be their own fault, if they be not prepared successfully to resist such a measure, should it ever be again attempted.

We have before alluded to the impetus that railway speculations have given to the ironmasters and mineowners throughout France and Belgium, to embark more extensively in working them. These two countries abound in iron, lead, zinc, and coal, which materials they have hitherto, however, principally imported from England, as machinery has been wanting, but within the last five years so many experienced English machinists having gone over, that they now bid fair to compete with us, especially as labour and provisions are not more than half what they are in this country. France, and, in fact, the whole of the continental powers, have ever been jealous of the inventive genius of Englishmen and their speculative commercial enterprise, which has rendered England, although an isolated island, to be considered and respected as the great emporium of wealth, talent, and mechanical perfections, not only as regards manufactures, but in machinery of every description, particularly that of steam navigation and railways. The rapid progress that has been made of late years in both the latter branches throughout the United Kingdom, has not only aroused the attention of the Governments of France, Belgium, Germany, Austria, and Russia, but private individuals, to put down the monopoly that existed by this country over machinery in general, whether for steam-vessels, locomotives, or manufactories where steam-power is used. They now have begun to construct their own machines, and work their own mines, especially iron and coal, so as to enable them to furnish the great demand that is making for iron rails, and all the *materiel* necessary for the lines in progress from one end of the continent to the other—north to south, and east to west, and that chiefly under the superintendence of Englishmen. It is British capital and enterprise, however, it must be observed, that are giving this speculative development to the industry of foreign countries, particularly in France, Belgium, Spain, Portugal, Austria, and Italy, where, in a few years hence, there will not only be railways intersecting from one point to the other, but give the greatest facilities to the working of some of the richest mines that have been hitherto lost to man. An interesting return has been made by the Minister of Public Works, at Paris, compiled from the reports of a commission of the most experienced geologists, engineers, and miners, giving the names of all the different departments, or districts, throughout France, in which silver, iron, copper, lead, zinc, tin, manganese, coal, &c., are found, also marble, and stone, suited for lithographic purposes. It appears that the number of mines now being worked amount to 446—viz., 261 of coal; 143 of iron; 14 of lead, copper, silver, antimony, and manganese; 16 of bituminous minerals; and 12 of rock salt. These works give employment to upwards of 33,880 workmen. The iron-works in France have of late years acquired great extent, and several very important improvements have been introduced in the different processes of producing cast or wrought-iron, on the most approved methods used in our large iron manufacturing districts.

To show the advance that the making and use of engines, locomotives, boilers, &c., has made during the last five or six years, there are at present 6350 steam-boilers at work—5613 of which were constructed in France; 3369 steam-engines, of which 633 are high pressure, and 2736 low pressure, worked by 4652 boilers—representing a force of 127,544 horse-power, and replacing at least the labour of 892,790 persons; thereby affording a most astonishing facility to accomplish those works that where years ago considered impossible. The enlightened Government of Louis Philippe is giving every encouragement to the perfection of machinery and mining operations throughout the country—the building of steam-vessels, and the extension of railway communication, so as to compete with England in the advancement of transit in the interior, and commercial facilities of conveyance over the ocean. Thirty years of peace in Europe has had the most wonderful effect in ameliorating the condition of man, and the improvement of science, manufactures, and every branch of industry, from the barbarous clime of Russia, to the fair congenial skies of Portugal, Spain, and Italy.

Smelting in South America.—We are informed that the native proprietors of the silver and copper mines in the republics of Chili, Peru, Boliva, and Columbia, are striving all in their power to establish smelting furnaces in the country to melt, or smelt, the ores themselves, instead of exporting them as they do to Europe, as taken from the mines in their native state. An exploration of the coal beds that so abundantly exist in Chili, and the other republics of South America, is being made by some of their most scientific engineers and geologists, and the account given by them is most satisfactory; that these countries will be enabled to supply themselves with carbon of an excellent quality, in lieu of wood fuel, which is now universally used throughout the whole of the southern continent of the new world. All that is wanting is, the introduction of English machinery to make this smelting a most advantageous speculation to the proprietors, and negotiations are making in this country for the necessary steam-engines to work the coal mines.

The Enterprise of English Capitalists—The English speculator is a being who regards not country or people, no matter how far distant, so long as he can turn his operations to account. It is he who has instilled the spirit of enterprise into all nations, not only of the old world, but of the new: he has explored the wealthy mines of Brazil, Mexico, Columbia, Peru, Chili, Cuba, the Havana, and the whole of South America, and raised the inhabitants from their lethargitic slumber to become industrious, and work those treasures which have been hidden from the eyes of man since the creation of the world, or been for ages neglected, from apathy or want of resources and enterprise. Were it not for the impetus given by him to commerce, enterprise, and invention, the continent of Europe would not be in the forward, civilised, and prosperous state it now is. When we look back at France in the eighteenth century, and *la Grande Nation* in 1845, what rapid progress has been made within the last thirty years in her commerce and manufactures by the introduction of that machinery which has caused England to be the admiration of the world, and been the means of raising man above the brute creation, who formerly toiled like a slave in mines, coal-pits, and manufactories, but who is now aided by the power of steam. It is the English speculator and capitalist who has excited the ambition of railway enterprise throughout France, Belgium, Germany, Italy, Spain, Portugal, and uncivilised Russia, even to the far distant shores of India, East and West, and the Americas, North and South. It is his speculative mind that has caused to be built those splendid steamers that now cross the wide Atlantic and the Mediterranean, and waive the colours of England from St. Petersburgh to Calcutta over the ocean, which alone forms one of the chief bulwarks of our glory and prosperity.

Bridge-building in America.—The first iron bridge, ever constructed in the United States, has just been completed at the Pottstown depôt of the Pottsville and Philadelphia Railway—it is on the truss principle, thirty-four feet span, weighs rather over nine tons, the cords of wrought-iron, and its cost about 325*l.*

MANUFACTURE OF STEEL.

We have before referred to the exhibition of Mineral Productions at Berlin, as having attracted the attention of the chief miners and ironmasters on the continent, from the important nature of the subjects introduced. In following up our notices, we this week translate the following paper on Steel, with the different processes adopted in mixing ores and casting:

Preparation of the Ore.—The ores for the production of cast-steel are very fusible, possesses a large portion of manganeseferous qualities, but only a small quantity of lime. This ore is a mixture of hydropidated iron and specular iron—the residues are of argillaceous schiste. After their extraction, they are washed and separated from the quartz; the ores are afterwards roasted, which is generally done in conical pans—and it is only after having left them for one or two years exposed to the air, that they are submitted to the following ordeal:—

The Large Furnace.—The mixtures are made as follows:—

20 per cent. of ore, not roasted or burnt;
74 per cent. of ditto—roasted;
6 per cent. manganese.

100, to which is added, 5 per cent. of calcareous stone.

The greater part of the high furnaces consume wood as a fuel, but lately they have made some trials, at Siegen, to employ coke, which has answered all the purposes of wood, if it were not that the casting afinery itself with less facility, but the quality is the same. The production of white shining metal is a proof of the superiority of the high furnace. It is this description that contains the greater portion of steel, but there are middling qualities of a grained white, which are also much esteemed. [We gave the price of these different articles under the head of "rough cast."] After the operation of the high furnace, comes the afinery, which is as follows:—

Afinery Fires.—In these fires are afined all the productions of the high furnace—nearly similar to the afinery of iron—and the whole mass is drawn out in bars of eighteen lines square, which gives the rough steel, and which is worth 50*f.* to 55*f.* per 100 kilos (2*l.* to 2*l.* 5*s.* per 2 cwts. Eng.)

Refinery.—The rough steel bars, in thin sheets, of two to three lines in thickness, and twenty to twenty-four lines in width, are drawn out; these sheets, or small blades, are tempered and broken in several pieces, to ascertain their quality. They are assorted according to the description of steel that is required; twelve to fifteen are placed one upon another, which are held by pincers in the fire to solder them together; and, by cutting them and re-soldering them, according to the quality of steel wished to produce, they can refine it to any temperature; but if, during this refinery, iron is mixed with the steel, it produces an inferior article, but at the same time much cheaper.—The manufacture of steel is, therefore, not a very simple process, which varies greatly in different countries, particularly in Styria, where they avoid producing a shining metal, preferring the white or grained; it gives a quality of steel, much more pliable, but not so durable, and, therefore, is more adapted for springs than for making of blades, or other cutting instruments.

Development of the Mineral Wealth of Chili.—This republic is one of the least known in Europe, but it is, without exception, one of the most flourishing of the South American States that have thrown off the yoke of Spain. Notwithstanding the dissensions and civil wars, that have unfortunately prevailed for so many years in Mexico, Columbia, Central America, Peru, Bolivia, and Buenos Ayres, by the usurpation of different military chiefs, all seeking to have the supreme command, Chili has been for the last sixteen years in a perfect state of internal tranquility, governed by men who only have the interest and welfare of their country at heart. Its inhabitants are sober, industrious, and strict observants of the laws, and instead of having that revolutionary feeling, that is the destruction of social order in the adjoining states, they devote themselves in advancing the commerce and prosperity of the republic, under the wise administration of a President and Congress, who justly deserve the name of representatives of the people. Within the last few years very great improvements have taken place in the advancement of every branch of industry, under the special encouragement of the Government, which is striving to render it a prosperous nation. Chili is the richest of any of the South American States in minerals of every description, abounding in silver, copper, iron, lead, and coal, which is found to be of an excellent quality, but only want the introduction of English machinery and enterprise to work these hidden treasures to advantage. The vast cordilleras of the Andes may be considered the mineral kingdom of the New World, but, from the scarcity of scientific men and national enterprise, the valuable ores that are known to exist in those regions have hitherto remained unexplored. A new era is, however, likely to develope itself in the advancement of European science in that country. Senor Don Hilario Pulini, who it may be remembered, as stated in the Journal some months back, having been commissioned by his Government in Europe, for the express purpose of visiting the different manufacturing towns of England and the Continent, for the purpose of making a report of the various improvements that have been made in machinery and other inventions, likely to be advantageously adopted in Chili, has nearly terminated his labours in this country. We are informed, that one of the great objects of this experienced engineer, is to introduce railways into the republic, and which, no doubt, will ultimately lead to their general adoption throughout all the different states, by the laying down of a line from the great commercial port of Valparaiso to the capital of Santiago, about 135 miles, passing through the most populated and fertile districts, winding along the coast for some distance, thereby avoiding all difficulties that have hitherto presented themselves as insurmountable for a railroad. This grand undertaking has met with the greatest encouragement from some of the most influential merchants of London and Liverpool, connected with the republic. Senor Pulini has drawn out a most accurate plan, or map, with the distance, number of stations required, bridges, viaducts, &c., and the expense likely to be incurred in the cutting of the line and laying down the rails, locomotives, carriages, waggons, trucks, and all the necessary materials. The land will be obtained by a free concession on the part of the Government, and that that does not belong to the state, can be obtained at a most trifling expense, as every person through whose estates the line may run, will not only willingly render every facility they can for its completion, but even afford the manual labour, if required, by those employed under them. We shall refer again to the subject, when put in possession of the whole of the projected plans.

On the Use of Gunpowder as an Auxiliary to Dredging Operations.—Mr. G. Edwards read a paper, at the Institution of Civil Engineers, descriptive of a method employed by him for breaking up the shoals in the River Severn, between Stourport and Gloucester. These shoals consist of marl rock, so compact and tough as to resist all attempts to break it up with the steam dredger, or by prize bars, or with a powerful species of subsoil plough. Recourse was, therefore, had to blasting with gunpowder, and the process of these operations formed the subject of the paper. It appeared that during the summer months there was in some places only two feet depth of water over some of the shoals, and the navigation was, therefore, greatly impeded. In 1842, an Act was obtained for the improvement of the Severn, and under the directions of Mr. W. Cubitt, V.P. Inst. C.E., the various works were commenced. The object was to obtain a channel with a depth of at least six feet of water at all times throughout the river. Messrs. Grissell and Peto were the contractors for the works, and for them Mr. Edwards designed and executed the blasting operations. A series of rafts were moored in a line over the shoal parallel with the bank of the river. Along the centre of each raft there was an opening, through which wrought-iron tubes, three and a half inches diameter, were driven down at intervals of six feet apart, through the gravel down to the marl; withinside these tubes the workmen used the chisel-pointed jumper bars, to make the shot holes to a depth of six feet below the surface. The loose stuff was extracted by an auger tool; a cartridge of canvas, well pitched and tallowed, containing eight pounds of powder, was lowered through the tube into the hole, which was well rammed with loose marl. The charge was then fired by means of Bickford's fuse. There was generally but little apparent external effects from the shot, except lifting the pipe a few inches; but, sometimes, a column of water would be driven up through the water to the height of forty or fifty feet. It was found that each shot loosened a mass of marl of conical or parabolic form, of which the bore hole was the centre, and its bottom the apex, so that four adjoining shots, of two parallel lines, would leave between them a pyramidal piece of marl, which was removed by the dredging machine with the loose stuff. The operation of blasting was repeated in parallel lines along all the shoals, and the stuff was dressed up at the rate of 200 to 300 tons per day—the cost of the blasting was about 9*s.* 9*d.* per cubic yard. It was stated, that the six principal shoals had all been successfully operated upon, and great credit was given, not only to the design, but also to Mr. Edwards, for the systematic and complete manner in which he had arranged and conducted the operations.

MINERAL STATISTICS OF ENGLAND AND THE CONTINENT

According to a statistical return made by M. Goldenberg, of Berlin, the following is the annual production of iron in the different European states:

England	1,500,000	tons.
France	350,000	,,
Russia	320,000	,,
Zollverein and Hanover	150,000	,,
Austria	100,000	,,
Belgium	150,000	,,
Sweden	90,000	,,
Other parts of Europe about	50,000	,,
Total	2,700,000	tons.

By the above return, it will be seen that Germany, although very rich in minerals, only occupies the fourth rank in the metallic kingdom. Notwithstanding her abundance, she imports annually, on an average, upwards of 100,000 tons of cast-iron, and about 60,000 tons of iron bars. This state of things is in consequence of the application of coal in the manufacture of iron; it is this important acquisition that has given England so great an advantage over the German iron, added to the little protection or encouragement given by the Government to the manufacturing of native iron. In examining the great gifts of Nature of the respective countries, we see England gifted with every means of making her iron manufactories flourish. In every direction where she has iron ore, she has also coal to work it, of a much better quality than in Germany or any other part of Europe, without any tax being imposed upon it—whilst in this country (Germany), on the contrary, the state levies a duty of one-tenth on the whole, which is, on an average, equal to the net produce; therefore, ore and coal will always be at least one-fourth or one-third cheaper than in Germany. It is by the substituting of coal fuel instead of wood in her manufactures that the prosperity of England is so great. In 1750, this country did not produce more than 20,000 tons of iron melted with wood. In 1806, its production was already 250,000 tons, and it is to be remarked that there were only two high furnaces where wood was used. In 1827, England manufactured 700,000 tons, and had no more at that period than eight furnaces in which wood was burnt. So rapidly has her iron trade increased that England alone produces an equal quantity to all Europe combined—thanks to her valuable coal mines. In consequence of the difficulties that the masters of forges have to contend against, they never can compete with those of England, as the expense of conveyance, and the short quantity of coal, drives them to resort to wood as a fuel. It is only in Silesia that a few forges are to be found where coke is used.

The following is the comparative price of German coal with that of England. In Westphalia it is 9d. the 100 kil., or 2 cwts. English, at the mine; the forges of the Moselle pay for the coals of Saar 1*s.* 6*d.* to 1*s.* 8*d.* the 2 cwt. What a difference with those of England, where the masters of forges can procure coal at 5½*d.* to 7*d.* It is this facility that enables them to use with advantage steam power; and another one is, that the forges are generally placed near each other. Not so in Germany, where they are scattered at a great distance from one another, and the conveyance to the furnace often comes to 10*s.* the 2 cwts. It is these gifts that enables the English iron to be sold at 12*s.* per 2 cwts. cheaper than those of Germany, and, should the present state of things continue, the manufacturing of iron will disappear from Westphalia, thereby throwing thousands out of work. The maxim, that it is the interest of all countries to procure their material at as low a price as possible is very good in principle, but difficult in practice. In the Grand Duchy of Berg there are 40,000 workmen; two-thirds of their articles are exported, and as they have to pay so much more for their German iron than the English, they have the greatest difficulty to compete with it. The iron which costs in Germany 16*l.* 15*s.*, only costs 11*l.* 4*s.* imported from England *vid* Dusseldorf—making a difference of 6*l.* in favour of the latter and better quality. In calculating the daily consumption of twenty workmen—viz., ten masters and ten companions—at 3 cwts., that gives a loss of 17*s.* 6*d.* There is a great outcry against the forge masters, who are accused of charging too high prices for their iron, as they either gain too much, or their furnaces are badly conducted; for, whilst in Belgium 2 cwts. of the rough metal costs 4*l.* 16*s.*, iron bars for nails was only 10*l.*; iron for general work at the rate of 5*l.* 4*s.*; in Westphalia the rough iron is 6*l.*; iron bars for rails costs 14*l.*—there remains, therefore, the price of 8*l.* for working iron, which makes it 2*l.* 16*s.* more than in Belgium. One great evil is, that the different German Governments are either proprietors or shareholders of the iron mines and forges, which has a tendency to keep up the prices. The recent commercial treaty between Belgium and the Zollverein will have the effect of introducing a large quantity of their iron into Germany. The forges of Couillet have delivered at Breslau all the iron rails necessary for the railway at a much lower price than they could be procured from England, and they have an order for one hundred million pounds weight for the railways of Bavaria and other German states. What is wanting in Germany is, that her furnaces should be well organised, so as to compete with England and those of Belgium. Some of the forges in England are on an immense scale, particularly that of Dowlais, in Wales, belonging to Sir John Guest, which alone furnishes 35,000 tons, or one-fourth the production of the whole Zollverein. Since 1830, England has doubled her iron produce, in consequence of the numerous railways finished and in contemplation; when the mania is at an end, her iron will lower in price, so as to crush all other small concerns on the continent.

Remarkable Natural Phenomenon—The River Wear on Fire.—The River Wear, immediately above and below Framwellgate Bridge, Durham, now presents a singular appearance, as, when unruffled by the wind, it appears to be in a state of ebullition, occasioned by numerous streams of air-bubbles issuing from below. The circumstance, however, had not been regarded with much attention until Mr. Wharton, of Dryburn, having accidentally observed an unusual agitation of the water, was induced to take particular notice of one of the principal jets of air, and, finding its position the same on three successive days, was led to the conclusion, that it must flow from some fissure under the bed of the river, and would prove to be an escape of the light carburetted hydrogen gas generated in such fearful abundance in the coal and other strata of the district. A boat having been moored alongside the jet of air, and its inflammable nature fully ascertained by the application of a lighted taper, a large inverted funnel, furnished with a pipe of requisite length, was fixed over the supposed fissure, and all the gas issuing from it thus collected and conveyed into a small open-bottomed tin reservoir, or gasometer, floating on the surface, and provided with a burner and glass chimney. The gas could now be ignited at pleasure, and the supply was found to be sufficiently abundant to produce a large and brilliant jet of flame, arising, as it were, from the bosom of the old "river of Wear"—a strange and extraordinary spectacle, which has already collected many hundreds of spectators curious to see *the river on fire*. The stream of gas appropriated to the above experiment is one only of a great many others which occupy an area of from 50 to 100 square yards of water—and which must together discharge very many gallons of gas per minute. When the air is perfectly calm, large bubbles, formed by the ascent of the gas to the surface, and readily taking fire on contact with a lighted candle, mark the limits of the principal cluster of gas jets above the bridge—two others of smaller dimensions are observable below, and a still smaller one at some distance above the bridge, each of them being marked by the presence of numerous air-bubbles whenever the surface of the water is smooth. They are all situated nearly in a straight line, crossing the river diagonally under the bridge in a north-north-east and south-south-west direction. The distance of the extreme clusters, being upwards of 100 yards, furnishes a strong presumption that the source of this extraordinary discharge of gas is situated at a great depth below the bed of the river, and that it finds its way up the fissures of some "trouble," fault, or dislocation, of the strata from some of the lowest beds of coal or shale reposing below. No coal workings are known to exist within several hundred yards of the bridge, nor are there any within the distance of two miles which are sufficiently deep to have become instrumental to the appearance of this curious phenomenon. It must, therefore, in all probability be traced to one of those extensive natural accumulations of gas lurking in the fissures and pores of the strata far below the surface of the ground, which, when tapped by the operations, and fired by the candles of the miner, have been the frequent causes of those dreadful explosions, of one of which the workings of Hazwell Colliery bore such awful testimony last year. It has been proposed to light the bridge from this source, and other parts of the town, if there appears a probability of its continuance. Many persons assert that the have noticed *bubbles* rising from the water for eighteen months or two years past, and as the remarkable emission of hydrogen from one of the old shafts of Wall's End Colliery has been burning for many years, and giving a clear light, which is visible at night for miles, it is probable this natural supply on the Wear may last for years.

Original Correspondence.

THE MONMOUTHSHIRE AND GLAMORGANSHIRE BANKING COMPANY AND SIR B. HALL, BART.

SIR,—The proceedings before the Vice-Chancellor in this suit, will, probably, be reported in your next Journal, and, doubtless, be embodied in the report made by the directors at the coming half-yearly meeting, fixed for August 11. Let not the shareholders be misled by any specious representations put before them, but boldly demand an explanation of the alleged negligence and want of common discernment on the part of their directors, in entering upon a property, embarking some 6000*l.* or 7000*l.* in *common repairs*, with no sort of agreement for quiet possession thereof. Let them also have an explanation of the "holy father" and his 12,000*l.* —how this came about, and to what account the same has been transferred? Let them also insist upon calling in *competent* parties—and *disinterested ones, too*—to report upon the prospects of a profit from carrying on the works as at present: blowing two furnaces, the make combined of which scarcely amounts to *two-thirds* of the next nearest blast-furnace thereto. It is a matter of notoriety, and an *undeniable fact, that iron of the same quality as that made at Victoria can be purchased and delivered in their furnace yard at* 20*s. per ton less than the actual cost now incurred.* Refer to the report of Mr. Mushet made in 1841 (and no better authority can be quoted), for confirmation of this. A searching investigation into the state of the private accounts of the directors, trustees, shareholders, &c., in account with the bank, ought also to be made and reported upon to the shareholders. The "old lady" in Threadneedle-street is instituting a searching investigation into some matters connected with the above, particulars of which may form the subject of another letter shortly.

July 29. CANDIDUS.

MINING OPERATIONS IN SPAIN.

SIR,—As very extensive mining speculations are being entered into in England, for the purpose of working the mines of Asturias, Andalusia, and other parts of Spain, a synopsis of the richness of our ores may not be uninteresting to the readers of the *Mining Journal*, which, not only in Europe, but throughout the whole of South America, is considered the most authentic and most scientific organ of mining operations. Spain, as is well known, is one of the richest mineral kingdoms of Europe, abounding in silver, iron, quicksilver, lead, copper, zinc, and other ores, and especially coal, which only wants the introduction of machinery, so as to enable the speculators to carry out to its utmost extent the benefits that this hidden treasure offers to the enterprise of the nineteenth century. At the Special School of Mines (*Escuela Especial de Minas*) some very fine ores have been presented from the different mines throughout the kingdom as samples, which have been assayed by our most experienced mineragolists, previous to the report being made to Government, who is desirous that every facility shall be given to the advancement of the researches into our mineral resources. Since we have lost the mines of Mexico, Columbia, Bolivia, Peru, and Chili, we must now strive to work our own hidden treasures, that have for centuries past been neglected, to raise Spain to what she was, previous to the discovery of the New World, to rely upon her own industry. The ores of the undermentioned mines, after being assayed, give the following results:—Pozo de los Charcos, 23 per cent. of lead—7 adarmes 24 grains of silver per quintal of mineral. The mines of Amigo de los Ninos, 27 per cent. of iron, ditto 65 per cent. of lead—14 ad. 13 grs. of silver per quin. Pardos, in the province of Guadalajara, 30 per cent. of copper—6 ozs. 7 ads. 24 grs. of silver per quintal; ditto, 60 per cent. of lead, 5 ads. 4 grs. of silver per quin. San Antonio de Padua, 30 per cent. of iron. Neustra Senora de Toved, in the vicinity of Calatayud, eight specimens—the 1st, produced 37 per cent. of iron; the 2nd, 12 per cent. of copper; the 3rd, 31 per cent. of iron; the 4th, 21 per cent. of iron; the 5th, 35 per cent. of iron; the 6th, 22 per cent. of iron; the 7th, 10 per cent. of iron; and the 8th, 7 per cent. of iron. An ore, presented by his Excellency Senor General Ordonez, of Ceuta, in Africa, gave 9 per cent. of copper, and another from the mine of el Nino de Dios gave 35 per cent. of copper, presented by the Director-General of the Cerro Blanco. La Aurora, in the Sierra Montoro, gave 70 per cent. of lead—8 ad. 34 gr. of silver per quin. Picos de Guardemana, near Alcaraz, the mine of Chaparro, gave 62 per cent. of iron. The mine of Remigia gives 1¼ per cent. of quicksilver (*mercurio*). The mine of Concepcion, near Manzanera, 60 per cent. of iron. A mineral, presented by his Excellency the Duke de Osuna, gave 60 per cent. of lead—5 ads. 4 grs. of silver. Three ores, from the mines of Observacion, were presented by Don T. Ezquerra, two of which yielded 6 ozs. 1 ad. 10 grs. of silver; the third, 6 oz. 6 ads. 14 grs. of silver. By the same from the mine of Guardillon—3 ozs. 3 ads. 6 grs. of silver;—ditto, 4 ozs. 20 grs. of silver. From the mine of Esperanza—4 ozs. 20 grs.; ditto—5 ozs. 12 ads. 10 grs. of silver. A great number of other ores have been submitted for consideration, varying from 3 to 6½ ozs. of silver per quintal—30 to 50 per cent. of iron, 65 to 70 of lead, and 35 to 40 per cent. of copper. All that is wanting in this country are the means of working the mines, and machinery, as we have every resource to render Spain one of the finest mining kingdoms of Enrope, if not of the world, as every facility is offered by our ports in the Mediterranean and the Atlantic for shipment and commerce. The Government has very judiciously given permission for the importation of machinery from England *free of duty*, for the working of our mines by any companies that may be henceforth established; and also locomotives, rails, carriages, &c., &c., for the railways now in progress by the enterprising and speculative spirit of Englishmen. A few years hence, it is to be hoped that this country, which has, comparatively speaking, sunk into the lowest category among nations, will once more rise itself to that station which it is justly entitled to in Europe, being one of the most productive and richest in minerals of any.

Madrid, July 12. C. W.

MINING IN CORNWALL—THE CARADON DISTRICT.

SIR,—A great deal of excitement has been occasioned in the minds of parties connected with the different mines adjoining West Caradon, in consequence of the different reports in circulation respecting the direction or bearing of the lodes—some asserting the direction to be south, and others to the north of west, "as most agreeable to the position of their favourite sett." The party representing Caradon Consols Mine claim the advantage of having a continuation of the whole of West Caradon lodes running through the entire length of their sett. In driving the adit level from Tremarcoomb to Caradon Consols engine-shaft, two lodes have been intersected; the most southerly is not above six inches wide, the other lode is situate about twelve fathoms to the south of the engine-shaft, at fifteen fathoms under the adit. The next lode is about sixty fathoms north of the engine-shaft, on which they are sinking a shaft, by the aid of a flat-rod from the engine; the appearance and character of this lode is precisely the same as the flat-rod shaft lode in South Caradon Mine, "and from this lode to the main lode in South and West Caradon, is about eighty fathoms north." Then it will follow, that a continuation of neither of the productive lodes in West Caradon can be available in Caradon Consols, except the south lode, and that not to any great depth, as the underlie will bring it out into Craddock Moor sett. Splendid specimens of ore are found in Craddock Moor Mine lodes, a fathom or two deep from surface; in this sett twelve lodes have been discovered—five on a continuation of Gonamena lodes, two of West Caradon, and five in the direction of the unexplored ground between Gonamena and West Caradon. I admire the tact with which Craddock Moor is conducted: the levels extending west from Gonamena and West Caradon will have a tendency to drain Craddock Moor Mine, and will enable them by-and-bye to explore the lodes in the eastern part of the sett, without a pumping-engine; they are erecting a 16-inch cylinder engine for the purpose of draining the top water, and for dressing, and so on.—I beg to assure you I do not make these remarks as an interested individual; I have no share or interest, directly or indirectly, in either of the mines.—A MINER: *Liskeard, July* 29.

MINING IN CORNWALL—TRELAWNY MINE.

SIR,—As an adventurer in Trelawny Mine, I beg to thank you for your excellent and just remarks upon the conduct of certain individuals here, with respect to the sett of Wheal Mary Ann. Together with others, who wish to uphold legitimate mining, and keep faith with out-adventurers, I cannot but express my regret that parties occupying a respectable station in society should lend themselves to conduct so palpably unjust, and so unworthy of agents and managers. There can be no doubt that we have been deceived by our purser, and were lulled, by our confidence in him, into a dangerous security; and, perhaps, you will in your next endeavour to procure answers to the following queries:—1. Did not Capt. James Clymo tell a large adventurer in Trelawny that application had been made for Wheal Mary Ann, solely on behalf of the Trelawny Company?—2. Did not the late Mr. H. Lyne (the predecessor in business of the present Mr. E. Lyne), tell a shareholder in Trelawny, that he had applied for the sett of Wheal Mary Ann for the Trelawny adventurers, and that he who applied on behalf of any other party would be a rogue?—3. Was it not always understood by the working agents of Trelawny, as a reason for placing their engine so near the south boundary, that Miss Pollard's ground was to be added, if obtained, to the Trelawny sett?—4. Did not Peter Clymo, at several account meetings of Trelawny, state, in answer to repeated inquiries, as to how Miss Pollard stood affected towards granting them her ground, that he was endeavouring to obtain the grant, and hoped he should succeed?—and did he not lead the shareholders in Trelawny to infer that he applied solely on their behalf, *and as their servant?* 5. Was not a draft lease of Wheal Mary Ann prepared, leaving out *Peter Clymo's name*, and also "co-adventurers?"—and did not Miss Pollard refuse to sign any lease, until *both* were inserted? Again, who was it that prepared the draft in such a state?—and did not Miss Pollard's refusal to execute a lease without Peter Clymo's name being in it, clearly show that she considered him (the paid agent of Trelawny) as the principal party with whom she had treated? I should be glad to know, further (asking pardon for my inquisitiveness), when it was that Messrs. Peter and James Clymo and E. Lyne first determined to oust the Trelawny adventurers, and keep Miss Mary Ann to themselves?—surely they did not, through interested motives (when Miss Pollard expressed a wish to have her ore sampled distinct from Trelawny), torture her words into an unwillingness to allow the Trelawny adventurers to have anything to do with her ground? I have not time to ask more this week.—*Liskeard, July* 29. QUERIST.

[We have caused a few inquiries to be made with respect to the queries of our correspondent; in the meanwhile, we can only say, that it appears to us to be clear, that, whatever Capt. Peter Clymo may have stated, the Trelawny adventurers have always been led by him to believe they would eventually have Miss Pollard's sett added to their own. Why, we would ask, was the Trelawny engine placed so near the southern boundary, if not to command Miss Pollard's ground? Surely, the temerity of even the Clymo's would not go so far as to say, that it was placed there to work a mine for their individual benefit, at the expense of the Trelawny Company! The fact of Miss Pollard having refused to sign a lease without Peter Clymo's name being inserted, speaks volumes for the Trelawny Company, if it be correct, and we presume our correspondent has the means of knowing.]

DEVELOPMENT OF THE MINERAL WEALTH OF IRELAND.

In the *Mining Journal* of July 19 we remarked with much gratification—because we deemed that it would be of useful tendency in the advancement of the people of Ireland to a condition of prosperity—on the probable development, by means of the facilities of railway transit, of the mineral resources of that country—resources hitherto of scarcely any national advantage, by reason, undoubtedly, in a great measure, of the difficulty of access to them; but also, it must be admitted, because of the unsettled and unstable state of its social and political relations, rendering security for the operations of capital and industry exceedingly doubtful—or, at the least, but precarious—particularly in its southern and western, and as they happen to be, its principal mineral, districts. Into the question of causes, creative of this last-mentioned obstacle, or, at least, discouragement, to the embarkation of English capital in the development of mineral or other resources, known to exist so abundantly in Ireland, it is not necessary to our present purpose to enter. The effect is unhappily too obvious, and practical, and whilst that effect—social and political disorganisation, and consequent insecurity of person or property—remains unimpaired in its efficiency of evil to the real interests of the country, it will be vain to expect that capital will be risked in the speculation of such development. In the civilisation of a rude or barberous people, the primary step is the formation of great lines of road or highways, communicating with, connecting, and rendering easy and convenient of access, all parts of that people's country. To the general prosperity of the Irish people it may not be unreasonably expected that the amazing facilities of transit afforded by railways will ultimately and extensively lead: at the same time it is to be hoped, that *pari passu* with the construction of railways will be the establishment of political and social tranquility—the removal of the cause and the effect of "agitation," at least as a *system*, alike derogatory to the national character, and detrimental to the prosperity of the people.

The very outlay of the capital to be expended in the construction of railways even now required by its present traffic, must needs be of great benefit in a social point of view, as from it employment and increased wages for the labouring classes must flow, and an impetus be given to trade in all its departments, and that mass of human misery, the necessary consequence in a dense population of want of employment for the majority, be in a great degree alleviated. This is a consideration with the philanthropist, if not with the capitalist, in his estimate of the beneficial effects of railway speculation in Ireland; but to the true patriot and the enlightened statesman, desirous of that country's advancement to a prosperous condition, a development of her resources, alike in mineral, manufactural, and agricultural productions, by means of such speculation, is the all-absorbing consideration, and, therefore, is it hailed and encouraged by both, in the confident anticipations of its important results. So much for general views, now to particulars. In illustration of the mineral resources in the southern and western districts of Ireland, we alluded, among other mineral productions, to the manganese ore recently discovered at Glandore, in the county of Cork, and expressed some surprise that from the facility of conveyance of the ore from the mine to the place of shipment, the extent to which it is worked was so trifling, and assumed that the attention of capitalists must necessarily be attracted towards so profitable an outlay for it, as this mine affords. Now, the truth is, that no effective effort had been made, at any time since the discovery of the ore, to induce an outlay of capital in its production from the mine.

We have been favoured by a gentleman, on whose authority we can rely, who recently visited the district, and obtained his information from a proprietor resident in the neighbourhood, with the following account of the rise and progress of this promising mine:—The manganese mineral was discovered on the lands of Glandore about twelve or thirteen years since, and was first found on the surface of the land in detached stones, about the size of small paving stones, rounded off by exposure to the action of the weather. A small cargo having been collected in this way, was shipped for Liverpool, and found a ready market there, in consequence of its superior quality. It was purchased by those who traded in that article, and who subsequently prepared it for bleaching purposes. At the period alluded to, manganese in general bore a fair remunerative price, and although the sale of it was, in a great measure, confined to two or three towns in the north of England—say, Liverpool, Manchester, and Bolton—yet it seldom lay any time on hand without finding a purchaser, particularly the Glandore manganese, which always bore, and still maintains, a high character. However, the large influx of manganese which has, within the last three or four years, found its way into the Liverpool market from some parts of the continent, as well as of England, has increased the supply beyond the demand, and, consequently, reduced the price of the article there below its original amount. If other maritime markets for the sale of the manganese, besides Liverpool, could be found, quicker sales and better prices could be commanded, but there is no rival market that we are aware of, to compete with that of Liverpool, which seems to engross the whole of the manganese trade, and that, too, on its own terms. When the first cargo, consisting of the round stones before-mentioned, was sent from Glandore to Liverpool, it sold for nearly 8*l.* a ton; but at present the price of the same manganese will not exceed 4*l.* a ton. It is now, however, carefully prepared for the market, and the cost of sinking, raising, carting, cleansing, and breaking, makes a large inroad upon the profits. The Glandore manganese is found in two different shapes, quite opposite to each other; in the one case it consists of a very hard rock from twelve to forty feet below the surface, and impregnable to crowbar or pickaxe, without the aid of gunpowder; in the other case it lies in the form of a gravelly stratum (like limestone gravel), intermingled with occasional blocks, and with an earthy substance; but the quality of the article in either of these cases is very nearly the same, and continues to maintain its good character. One great matter in favour of the Glandore manganese mines is their contiguity to the sea, the distance being little more than a quarter of a mile from the cleansing yard to the quay where the vessel takes in her cargo. This, no doubt, is an advantage of much importance, as it enables a sufficiency to be drawn from the stores in a few hours as would load a vessel of moderate size. With this gentleman's statement to us, of particulars of the Glandore manganese mine, we shall at present conclude. In a future Number we shall notice several mines and quarries in progress of being worked in the district alluded to.

NEW STEAM PROPELLER.—A Mr. Leonard Phleger, of Wilmington, U.S., has invented a submarine propeller from the vessel's stem, which is stated to bid fair to rival the screw; it is composed of four blades (if they may be so named) of the form of half a hollow cone, cut down laterally, and placed on a shaft with the concave parts outward, and slightly at angles with the line of the axis. With a small boat of twenty-five feet long, and a small engine of 2-horse power; this propeller is said to have drawn a raft weighing 28,000 lbs. against the tide with the greatest ease, and alone accomplished a speed of twelve miles an hour; and, by lengthening the blades, the speed is increased. Besides its power, a great advantage arises from the water being driven in a direct line in the boat's wake, making no swell or spray, and which must prove of most essential importance.

Proceedings of Public Companies.

UNITED MEXICAN MINING COMPANY.

The half-yearly general meeting of shareholders was held at the London Tavern, Bishopsgate-street, on Wednesday last, the 30th inst.—STEWART MAJORIBANKS, Esq., M.P., in the chair.—Mr. MATHER (the secretary), having read the advertisement convening the meeting, and the minutes of the last meeting, which were confirmed, the CHAIRMAN regretted the absence of the worthy chairman of the company (Sir JOHN EASTHOPE), who was now in Paris, and confined to his chamber from indisposition; and stated that he had great pleasure in informing them that, since the last meeting, they had received unexpected remittances from Mexico.—At the meeting on the 25th of June last, they had proposed a dividend of 5*s.* per share, since which they had received 820,000, and a bill for 1500*l.*, and it was their intention to recommend a dividend of 7*s.* 6d. instead of 5*s.* per share: it was true this would leave only 3782*l.* in hand for contingencies, as agreed at the former meeting, but this was not intended to violate that resolution in future; the resolution for the dividend of 7*s.* 6d. per share was then unanimously agreed to, payable on and after the 13th inst. The following report was then read:—

REPORT.

The directors having so recently met the proprietors, when a statement of the company's affairs were so fully reported, that, upon the present occasion, they have but to lay before the meeting the substance of the despatch since received from Mr. Shoolbred, and dated at Guanaxuato, the 26th of May, at which place he arrived on the 18th of the month.—[Here extracts of Mr. Shoolbred's despatch were read, and which have already been published.]

Management in London.—James Mackillop and John Hibbert, Esqs., are the two directors, and Thomas M. Flockton, Esq., is the auditor, who go out of office this year by rotation, but, being eligible thereto, offer themselves as candidates for re-election.

Finances in London.—The following is the account of receipts and payments since the last meeting, held on the 25th June, and the statement of funds now on hand:—

Amount of total assets reported on the 25th June last				£18,502	13 5
RECEIVED SINCE.					
Remittances from Mexico	£5602	0	9		
Transfer fees	£3 15	0			
Discount on stamps	0 18	0—	4 13	9	
Interest on cash lent	64	6	7—	5,671	0 4
				£24,173	13 9
PAID SINCE.					
On London account	£ 293	10	11		
On Mexican ditto	58	7	1		
On Red Scrip ditto	375	0	0—	726	18 0
Total assets				£23,446	15 9
Subject to the—					
Auxiliary capital unclaimed	£1202	10	0		
Red Scrip unclaimed	2271	10	0—	3,474	0 0
Surplus or available assets				£19,972	15 9

James M'Killop and John Hibbert, Esqs., who went out of office as directors, and Thomas M. Flockton, Esq., as auditor, were severally re-elected, when the meeting was made special for the purpose of confirming the resolutions, prepared under the advice of counsel, and passed at a special general meeting of proprietors held on the 25th of June last, for altering certain clauses of the Deed of Settlement relative to the payment of dividends, so as to authorise the directors to make such payments whenever, and at all times, when they may be in possession of funds sufficient for the purpose.—These resolutions were then unanimously confirmed, and, after a vote of thanks had been passed to the chairman and directors, the meeting separated.

COPIAPO MINING COMPANY.

A general meeting of the proprietors was held at their office, on Wednesday, the 30th ult., HENRY HARMAN, Esq., in the chair.

After the preliminary business of the meeting, the report was read by the Chairman:—

REPORT.

During the past year, only two vessels have arrived for this company—viz., the *Margaret Hardy* and the *Magellan*—bringing, together, 813 tons of copper ore, which averaged 23 per cent. of copper, and realised 18*l.* 5*s.* per ton. The ore which arrived in the *Magellan* came from the new mine of San Pedro, and yielded 24¼ per cent. of copper. The quantity of copper ore raised at the company's mines during the past year was 1090 tons. At the date of the last advices (17th April) the manager had a stock of about 2300 tons of copper in the valley of Copiapo, of which 500 tons were in the port, ready for shipment. Owing to the advance which took place in freights at Valparaiso, during the latter part of last year, the manager deemed it prudent to defer taking up any vessel to follow the *Magellan*—this occasioned the delay which occurred in the shipments; the directors have, however, engaged three vessels on this side, at moderate rates of freight, which will together load about 1060 tons, and they may be expected to arrive in regular succession. The last report from the mining captain is dated Copiapo, 7th April (copy of which has been laid in the office), by which it appears, that the prospects at the mine of San Pedro continue encouraging, the raisings having been increased to seventy tons per month of good ore fit for shipment. The mine of Checo had also assumed a more cheering appearance than for some time previous; the raising averaged forty tons of ore per month, and it is reported to be of excellent quality. In the month of November last the mining captain, finding that the silver mine of San Jorge was become every day more expensive, without producing any ore to compensate for the outlay, submitted to the manager the propriety of discontinuing the working, if, after reaching the bottom levels, no improvement took place. These levels were laid open in the month of February last, and as the lode was found to be gradually declining, the manager decided at once to send the three mining captains to make a special survey of the mine, the result of which, after a close inspection, was a unanimous opinion, that the mine should be abandoned; the men and stores were accordingly withdrawn in the month of March last.

Pampa Larga Silver Mine.—Notwithstanding that the reports received from the manager during the past year have been invariably of the most promising character, there has hitherto been no discovery of silver. The arsenical course of ore in the bottom levels has, however, entirely disappeared, and the lode is now found to be composed principally of quartz, which is considered by the native miners as a favourable indication. According to the last advices, dated in March, it appears that, in cleaning out the old workings, they had found the main vein, which appeared evidently to have been worked to a great extent; the former proprietors are said to have extracted an immense quantity of silver from it, which occasioned the mine of Pampa Larga to be so much reputed in the country. The improved quality of the ore, as the works increased in depth, induced the mining captain to think, that when the old workings should be completely cleared out, a rich vein of silver would be discovered. The total expenditure at the silver mines from the commencement of operations to 31st December last amounts to 6577*l.*

The inferior quality of the copper ores which have arrived since 1842, the low rate of the standard, together with the import duty of about 20*s.* per ton, have occasioned a severe loss on the company's operations during the past two years, and although the ore received per *Magellan* has turned out of a better quality than the preceding cargoes, and the standard for copper has advanced nearly 2*l.* per ton, nevertheless, owing to the heavy cost of the company's ores, and the high rate of freight paid on the *Magellan* cargo, a small loss has resulted. The cash statement for the past year, with the balance-sheet of the company's affairs up to 30th June last, having been examined by the auditors, will lie in the office for the inspection of the shareholders.

The report was received and adopted.—After various remarks from different proprietors present, it was resolved that the meeting be adjourned to that day three months.—The thanks of the meeting were then unanimously voted to the chairman and directors, and the meeting separated.

LLANIVET MINING COMPANY.

At a meeting of the shareholders, held at the offices of Mr. H. Thomas, George-yard, Lombard-street, a resolution, mooted at the last meeting, having come under discussion, relative to the reduction of the number of shares—2048 to 256—it was resolved that the number should remain unaltered; it being considered that, in place of benefiting the company, a reduction would rather cause an inconvenience. The progress of the mine was deemed highly satisfactory, and the prospects of a very promising nature: the following report was read:—

REPORT.

Since our last report we have been cross-cutting through the lode at the forty and fifty fathom levels, the former of which is a kindly lode one and a half feet wide, with good stones of ore, and the latter we have not yet cut through. The twenty and thirty are just as last reported; but, we are happy to say, we have a great improvement in the sixty fathom level, which, of all, is of the greatest importance to us; the leader part of this lode is from one and a half to two feet wide, of rich, strong, yellow ore, worth from 25*l.* to 30*l.* per fathom. The engine-shaft has been sunk the last fortnight about two fathoms, and we hope to be down to seventy fathom level about the end of the month, when we shall commence driving to cut the lode, which may take us four or five weeks, and, from the great length of ore ground we have driven through in the sixty fathom level in comparison with the levels above, we fully anticipate to have a long and good course of ore when we get to the seventy fathom level, the ore ground having continually lengthened in every level as we go deeper. Within the last ten days the weather has been much against us sinking our new shaft, and the heavy rains now have impeded our progress so much that we have thought fit to discontinue the sinking for a few days, until the rains cease and the ground be drained, when we shall be able to sink much cheaper. In consequence of a mistake with the sampling, our ore was not sampled on Monday last, but shall sample to-morrow about 210 tons, which, however, we hope will be sold same time as if sampled on Monday last. We think the ores to be of much better quality than the last.

It was observed, after the reading of this report, the encouraging terms of which were received with pleasure, that the fact of the ore looking yellow at so deep a level was very promising, and was usually taken as a sign by miners, of a richer quality succeeding.—A vote of thanks having been given to the chairman and directors, the meeting separated.

WHEAL EMMA MINE.—This mine is situated in the parish of Sauthhill, near Callington. The sett is granted by W. D. Hornedon, Esq., of Callington, and a very highly respectable company is formed for prosecuting the mine. There is a lode four feet wide, underlaying north about three feet in a fathom. An adit is driving, which will cut the lode about eighteen fathoms deep in two months or thereabouts. The lode is composed of spar, gossan, mundic, and small particles of copper ore; it is of a very promising description, and no doubt, when the lode is cut in the adit, will produce good stones of ore from the present appearances. There is a large stream of water in the sett capable of working a wheel of 50 feet diameter to carry the mine down 100 fathoms deep.—THOMAS CARPENTER: *Callington, July* 28.

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Mining Correspondence.

ENGLISH MINES.

TRESAVEAN MINING COMPANY.

July 29.—An account held on the mine of profit and loss for May & June:—

Amount of cost for May and June				£4563 8 5
Amount of copper sold April & May	£4092 3 6			
Less lords' dues	204 12 2	3887 11 4		
Other credits		714 10 2	4602 1 6	

Showing a profit of 38*l.* 13s. 1d., to which add balance in hand end of April, 769*l.* 3s. 11d., leaves a balance now in hand of 807*l.* 17s.

TRETHELLAN MINING COMPANY.

July 29.—An account held on the mine of profit and loss for May and June:

Dr.—Labour cost for May and June			£ 863 15 4	
Merchants' bills for ditto			314 17 1	1178 12 5
Cr.—Copper ores sold April and May	£1599 9 10			
Deduct 1-15th for lords' dues	106 12 8	1492 17 2		
Other credits		148 6 6	1641 3 8	

Showing a profit of 462*l.* 11s. 3d.; to which add balance in favour of last account, 1102*l.* 10s. 9d.—making a total of 1565*l.* 2s.; from which deduct 600*l.* for a dividend of 5*l.* per 120th share, leaves a balance at bankers of 965*l.* 2s.

TREVISKEY MINING COMPANY.

July 21.—An account held on the mine of profit and loss for April and May:

Cr.—Amount of ore sold the 3d of April			£1487 13 11	
Deduct 1-12th for lords' dues			123 19 6	1363 14 5
Received for materials charged Treviskey and Barrier, April and May			89 2 11	
			£1452 17 4	
Dr.—Labour cost, April and May			£260 0 0	
Merchants' bills for ditto			238 2 7	
11-12th Treviskey shaft cost for ditto			396 10 8	894 13 3

Showing a profit of 558*l.* 4s. 1d; to which add balance in hand end of March, 121*l.* 19s. 1d.—making a total of 680*l.* 8s. 2d.; from which deduct 360*l.* for a dividend of 3*l.* per 120th share, leaves a balance now in hand of 320*l.* 8s. 2d.

BARRIER MINING COMPANY.

July 21.—An account held on the mine of profit and loss for April and May:

Amount of ore sold 3d of April			£2286 15 8	
Deduct 1-14th for lords' dues			163 6 10	2123 8 10
Dr.—Labour cost for April and May			£ 307 4 1	
Merchants' bills, &c., for ditto			145 5 0	
1-12th Treviskey shaft cost for ditto			36 0 11	488 10 0
			£1634 18 10	
Cr.—Profit end of March, on the unappropriated shares			£ 15 12 0	
Balance in hand end of March			11 17 2	27 9 2

Showing a profit of 1662*l.* 8s.; from which deduct 1560*l.* for a dividend of 13*l.* per 120th share, leaves a balance now in hand of 102*l.* 8s.

WHEAL TRELAWNY LEAD MINING COMPANY.

July 30.—The adit in this mine has been extended north from the engine-shaft forty-five fathoms, and south thirty fathoms; the lode in various parts of this level has produced several fine bunches of lead, intermixed with gossan and fluor-spar. The twelve fathom level has been driven sixty-four fathoms north, and is still being driven; in the present end the lode is fifteen inches wide, composed of fluor-spar and good stones of lead; throughout this level the lode has averaged two feet wide, containing for about two-thirds of the distance a leader or orey part about fifteen inches wide, and in some parts exceedingly rich; below this level, about twenty-two fathoms north of the engine-shaft, there is a winze in course of sinking, in which the lode is upwards of three feet wide, worth 20*l.* per fathom. This speaks well for the twenty-two fathom level coming in well under it, in which level they have sixteen fathoms more to approach this point; this level has been driven south forty-eight fathoms; in the present end the lode is nine inches wide, composed of gossan and large lumps of lead—this level has been productive the greater part of the distance; the twenty-two fathom level has been driven north six fathoms, through a very good lode; in the present end the lode is three and a half feet wide, worth about 18*l.* per fathom; the same level has been extended south nine fathoms on the course of the lode, which is three feet wide, and very good. In the end the lode is four feet wide, worth 25*l.* to 30*l.* per fathom. A considerable quantity of productive ground is still standing above the twelve fathom level, which is in course of working, and from which a large quantity of lead will be realised; below this level the lode is standing whole, with the exception of its being explored by levels and winzes. It may not be improper to observe, that since the lode has been intersected at the twenty-two fathom level the water in most places has been drained from above, which is considered a very favourable symptom, as it indicates a hollow lode, which generally proves rich for lead; there is also another feature which should not be overlooked—viz., that from every appearance the lode seems to increase in size and quality the deeper it is penetrated into. From all these favourable circumstances there is no doubt that the mine will shortly be in a position to pay dividends.

WHEAL CONCORD MINING COMPANY

July 12.—Agreeably to your request, I beg to inform you yesterday I inspected Wheal Concord Mine, and find the lode to be from four to six feet wide, producing good bunches of lead and silver ore, of a pretty good quality, and contains everything capable of producing much mineral in depth, and, should the mine be properly worked, I have not the least doubt of its being very productive. I find there are two other lodes about twenty fathoms to the south of the main lode, with a north underlay; these are very kindly, and can be worked by driving a level from the old mine at a proper depth, which will more fully develope their character. The wheel you have erected in the western part of your sett is capable of drawing the water about twenty-five fathoms deep; I find that shaft is going down in very easy and kindly ground, and appears to be quite mineralised; I judge from its appearance you will have lead ores in this place. As to the size of the steam-engine, I would recommend you to put in a 30 or 36-inch cylinder; on a fair calculation, I consider it would put the mine at 100 fathoms deep—this would give it a fair trial; I believe the present appearances of the mine would warrant this outlay. W. Penrose.

July 22.—Agreeably to your request, I have been at, and inspected, Wheal Concord Mine; I find the old mine to be drained to the depth of about nine fathoms under the adit level, by virtue of a horse-whim, which have enabled them to work the lode in the old backs, and have yielded some tons of lead ore; in different parts of these workings good branches of lead remain to be broken, should the water be again drawn out of the mine. If my memory serves me, I think the lode is large in several of the levels below this place, with kindly appearance, but at present poor; judging from the situation of the flat piece of ground lying to the west of the old mine, I think there is every probability of your discovering branches of lead in laying open the ground, but I fear the small wheel that you have now working to keep the mine clear of water would not be of sufficient power to manage the work below twelve or fifteen fathoms deep, with the present supply of surface water you now have. If I was to recommend any power for the working of the mine, it would be that of a steam-engine, to be erected at the old engine-shaft, of about 36-inch cylinder, which I think would enable you to sink the mine to some considerable depth; in the meantime levels might be driven east and west, which I believe will be the most effectual way of prosecuting the mine. Alexander Barrett.

HOLMBUSH MINING COMPANY.

July 29.—In the 120 fathom level, west of the cross-cut, the lode is six inches wide, producing stones of ore; in the south cross-cut the ground contiuues favourable. In the 110 fathom level, west of Hitchins's shaft, we have cut the slide which we had in the 100 fathom level, where we found the lode thrown about nine feet south; no doubt we may find a similar result at this level; the lode up to the point of the slide has been equally good, being eighteen inches wide, and worth 25*l.* per fathom; in the stopes in the bottom of this level the lode is one foot wide, and worth 14*l.* per fathom; in the stopes in the back of ditto, west of Hitchins's winze, the lode is eighteen inches wide, and worth 24*l.* per fathom; in the stopes east of ditto the lode is sixteen inches wide, and worth 18*l.* per fathom; in the stopes west of the sump winze the lode is eighteen inches wide, and worth 28*l.* per fathom; in the stopes east of Lobb's winze the lode is one foot wide, and worth 12*l.* per fathom. In the 100 fathom level, west of Hitchins's shaft, the lead lode is much improved; in the north end it is eighteen inches wide, and worth about 12*l.* per fathom; and in the south end it is fifteen inches wide, and worth about 8*l.* per fathom; in the stopes in the back of this level the lode is eighteen inches wide, and worth 22*l.* per fathom. In the ninety fathom level the lode is small and poor. In the sixty-two fathom level west the lode is six inches wide, producing stones of ore. In the rise against Bray's shaft, in the back of the eighty fathom level, the ground is favourable. We intend stopping the engine at Hitchins's shaft to-morrow, and commence changing the pitwork. T. Richards.

WEST WHEAL JEWEL MINING ASSOCIATION

July 28.—In the 100 fathom level east, on Wheal Jewel lode, nothing taken down in the past week; in the 100 fathom level west the lode is six inches wide, composed of spar and ore. In the eighty-five fathom level east the lode is disordered; in the eighty-five fathom level west the lode is worth 12*l.* per fathom. In the seventy fathom level west the lode is worth 8*l.* per fathom. In the eighty-five fathom level west, on new south lode, the lode is one foot wide, composed of good looking gossan; the ground in the eighty-five cross-cut is a little more favourable. In the forty-two fathom level east, on Buckingham's lode, there is no improvement. In the thirty fathom level east, on Morcom's lode, the lode is two and a half feet wide, composed of gossan, and occasional stones of ore; in the thirty fathom level west, on Tolcarne lode, the lode is three feet wide, one foot of which produces stones of ore. In Wilkinson's engine-shaft, sinking below the fifteen fathom level, the lode is three feet wide, promising for copper. S. Lean. R. Johns.

GUNNIS LAKE MINING COMPANY.

July 28.—Bailey's engine-shaft is sinking in favourable ground; the lode is at present divided, one part being about a foot and the other six inches wide, composed of spar, prian, and gossan; the lode in the adit level is about eighteen inches wide, composed of gossan, spar, and prian. W. Richards.

UNITED HILLS MINING COMPANY.

July 29.—In sinking Williams's shaft we have cut a north lode two feet wide, good ore; we shall continue to sink the shaft to the south of it, and we shall not be able to break ore for some time to come. In the eighty fathom level, in the eastern end, the lode is seven and a half feet wide, four feet on the south part orey throughout, of average quality; in the western end the lode is three feet wide, producing stones of ore, but not rich. In the seventy fathom level, in the eastern end, the lode is two and a half feet wide, eight inches good ore; west of diagonal shaft the lode is three and a half feet wide, eighteen inches on the south part ore of low quality; west of James's no alteration; the lode in the winze is seven feet wide, producing ore throughout, of average quality. In the sixty fathom level, east of eastern shaft, the lode is two and a half feet wide, fourteen inches on the north part ore of fair quality; west of James's the lode is two feet wide, ore of average quality; east of Harper's winze the lode is two and a half feet wide, nine inches on the north part ore of fair quality; in the diagonal shaft we are still sinking to the north of the lode, and shall continue to the eighty fathom level. In the fifty fathom level the ground is a little more favourable than last reported. In the thirty fathom level the lode is one foot wide, producing but a small quantity of ore. In the ten fathom level the lode is two and a half feet wide, producing some good stones of ore. At Wheal Sparrow, in the fifty and forty fathom levels, there is no alteration. In the winze in the thirty fathom level we expect to communicate to the forty fathom level by the end of the week; the lode is two feet wide, poor.

T. Trevenen. R. Williams.

TAMAR SILVER-LEAD MINING COMPANY.

July 28.—In the 145 fathom level the lode is eighteen inches wide, producing some good stones of ore. In the 135 fathom level the lode is six inches wide, at present poor. In the 125 fathom level the lode is one foot wide, composed of can, capel, and ore, saving work. In the 115 fathom level, the lode is fifteen inches wide, producing work of a fair quality. In the 105 fathom level the lode is two and a half feet wide, composed of can, capel, and ore, very good work. In the ninety-five fathom level the lode is two feet wide, composed of capel, with a small quantity of ore. In the eighty-five fathom level the lode is twenty inches wide, six inches of which is saving work. The sixty-five end is in slidy ground, and unproductive. The fifty-five end is poor at present. The incline plane shaft is sunk five feet below the ninety-five fathom level; it is suspended for the present, in order to clear the stuff which is lying in the level. We hope to sample on Friday next about seventy-five tons of rich silver-lead ore. At North Tamar, the lode in the sixty fathom level is one foot wide, composed of mundic and capel. In the fifty fathom level the lode is three feet wide, one foot of which is good work. In the forty fathom level the lode is six inches wide, rich work for silver-lead ores. At Wheal Hancock, the ground in the engine-shaft is still very hard for sinking. In the cross-cut, at the twenty-seven fathom level, we have a cross-course running direct with the cross-cut, and producing strong spots of lead ore, with favourable ground. James Sprague.

BEDFORD UNITED MINING COMPANY.

July 28.—At Wheal Marquis the lode in the seventy fathom level east is two feet wide, composed of spar, mundic, and ore, saving work. The lode in the fifty-eight fathom level east is two feet wide, composed of spar, mundic, and ore; and in the eastern winze, in the bottom of this level, the lode is two feet wide, and worth 8*l.* per fathom; in the stopes west of the western winze the lode is two feet wide, and worth 18*l.* per fathom. The lode in the rise, in the forty-seven fathom level, is twenty inches wide, worth 8*l.* per fathom. At Ding-Dong the lode in Thomas's engine-shaft is two and a half feet wide, worth 15*l.* per fathom for tin. At Wheal Tavistock the lode in Phillips's engine-shaft, two fathoms below the twenty-five fathom level, and in the twenty-five fathom level west is two and a half feet wide, composed of gossan, spar, and ore, saving work. We weighed at Morwelham, on Friday last, June ores, 109 tons 18 cwts., and sampled July ores, computed 108 tons.—J. Phillips.

SILVER VALLEY MINING COMPANY.

July 28.—I beg to say that the foundation for the bob at the south shaft was completed last week, and the masons will now commence building the bob-bed and wall that is necessary around the sides of the pit. The carpenters are getting on with the bobs as fast as possible, and the smiths are now preparing the ironwork for the same. S. Richards.

CALLINGTON MINING COMPANY.

July 28.—I beg to inform you we held our usual monthly setting on the 25th instant, employing eighty-six men on tutwork, and ninety-five men on tribute. The lift being fixed at the 100 fathom level, in Johnson's engine-shaft, we have again commenced sinking; the shaft is now about five fathoms below the level, the ground at present is hard; driving north at this level the lode is hove by a slide—the average value of the ground driven through in the past month is from 7*l.* to 8*l.* per fathom; in the south end the lode is disordered by a very hard bar of ground. The ninety fathom level continues to open tribute ground, both north and south. In the eighty fathom level, driving north, the lode is worth 4*l.* per fathom; the winze, sinking below this level, we expect to communicate with the level below in about ten or twelve days—the lode has not been taken down; in the south end, at this level, the lode is small and poor. In the seventy fathom level, driving south, the lode is worth 6*l.* per fathom. At the north mine we have extended the ninety fathom level north and south 11 fms. 4 ft. 6 in. in the past month, at an average price of about 50s. per fathom, the value of the ores broken is from 80*l.* to 90*l.* Our prospects here are much improved, the north ground being far more valuable at this level than in either of the levels above. We have now every reason to expect our lead ground to lengthen in this direction north as we get deeper; the east and west courses, which underlie south in the levels above, are now dipping north, carrying a soft and congenial channel of ground for silver-lead ores for a great distance from them. In the eighty fathom level the lode is worth 3*l.* per fathom. In the seventy fathom level the lode is worth 7*l.* per fathom. We have just commenced driving on the copper lode at the eighty fathom level it is small, about ten inches big, producing stones of copper ore, and presenting a kindly appearance: there are now three pitches working on copper. We expect getting a parcel ready for sale about the end of next month. The count-house shaft is sunk about two fathoms below the twenty fathom level, and the cross-cut, at the forty fathom level, is driven nearly twelve fathoms. We have about six fathoms more to drive to get under the said shaft. Our last parcel of ores (eighty-four tons), have sold at 22*l.* per ton. J. T. Phillips.

CORNUBIAN MINING COMPANY.

July 28.—Chiverton lode, in the eighty-six fathom level, going west of Murray's engine-shaft, is about two feet wide, and worth about one ton of ore per fathom; the lode in the eastern end, at this level, is two and a half feet wide, yielding some saving work. We have communicated the winze from the back of this level to the seventy-eight, which gives us a fresh supply of air, and useful for driving the ground on tribute. The pitches, working in the back of the eighty-six fathom level, are getting pretty much worked out; a month or two more will take away the greatest part of that ground. The pitches sinking on the north lode are without alteration. Our last computed thirty-six tons of ore has been sold for 15*l.* 14s. per ton. Richard Rowe.

EAST TAMAR CONSOLIDATED MINES.

July 29.—I am sorry to say we are disappointed as to the time we calculated on for putting Whitsun engine to work, there being some castings left behind, which Mr. West promised should be sent before this time, but I suppose, from the many engagements he has on his hands, he has not been able to do so; I expect them this week—this will cause a fortnight's delay. We are also waiting for the plan of Furzhill engine-house, which I expect this week, as it is time to get on with the buildings before the wet weather sets in. The prospects of our mines are encouraging, we have not, however, found any lode in the back of Whitsun adit level, but we have found some rich stones of fluor-spar and lead, from which it appears the lode must have been very good. We have discovered some ground in Furzhill shaft with a very good branch of lead—I think it is rich for silver. We have also discovered a large piece of ground going south from Charlotte, which will set on tribute, when we have cleared the adit south to Church-lane shaft, so as to let the water run into the old Birch mine. The pitches north from Charlotte's are working well.—B. Robins.

HAWKMOOR MINING COMPANY.

July 28.—Hitchins's engine-shaft is 14 fms. 4 ft. below the surface. Since my last report, a lode has been met with about one foot wide, about five feet above the present bottom of the shaft; this, however, judging from its underlay, and the fact of its being cut four fathoms shallower than the main lode was expected to be met with, cannot, in my opinion, be the main lode. I have, therefore, thought it advisable to continue sinking the shaft. We are all ready for commencing the western shaft, with the exception of the pumps, which I expect we shall have shortly. P. Richards.

TRELEIGH CONSOLS MINING COMPANY.

July 26.—In Christoe shaft, below the eighty fathom level, we are sinking in the country. In the ninety, west of the sump winze, the lode is three feet wide, worth 30*l.* per fathom. In Garden's shaft, below the seventy fathom level, we are sinking in the country. In Good Fortune shaft, below the seventy fathom level, the lode is large, but cannot as yet ascertain its value, as we have not commenced sinking. In the seventy fathom level, west of ditto, the lode is two and a half feet wide, producing stones of ore, and looking more favourable; the seventy fathom level east is suspended. In the sixty fathom level, west of ditto, the lode is three feet wide, worth 10*l.* per fathom. The sixty fathom level east is suspended. In the fifty fathom level, west of Symons's, the lode is two feet wide, worth 5*l.* per fathom; in the fifty fathom cross-cut north the ground is rather harder than last week; in the winze below the fifty fathom level east the lode is two and a half feet wide, worth 10*l.* per fathom. In the thirty-four fathom level, west of ditto, the lode is eighteen inches wide, with stones of ore. In the twenty fathom level west the lode is rather kindly, with stones of ore; in the west of ditto the lode is fourteen inches wide, of a kindly nature. W. Symons. S. Uren.

Wheal Maria Mine.—We understand an important discovery has taken place in this sett, about a quarter of a mile distant from the rich workings, and from which 100 tons of ore are expected to be raised this month.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

Gongo Soco, May 28.—I am happy to have to continue my favourable report of the English youths sent out in May last; the work performed by lads in the Cornish mines is accomplished here by negroes, and we find we can employ the Cornish youths much more advantageously. Capt. Trelcar this day visits Catta Preta, to consult with Capt. Pengilley respecting a trial of a part we have not yet touched, but which is said to have been of the richest.

Gold Workings. W. J. Henwood.

March 13 to 22	£3 10 10 0
Total from January to May 22	£79 7 1 12

ST. JOHN DEL REY MINING COMPANY.

Morro Velho, May 18.—Average number of heads working during eighteen days, 69. The stamps have been fully supplied with ore, nearly all from the mine. The stull to the east of Pengilley's shaft is completed, and to-morrow the borers will re-commence working away the eastern ground for the East Cachoeira sump shaft. Everything else is going on very regularly and well, so far as our force will admit. Both the Gamba and Bahu shafts are sinking well. The principal works in hand with the mechanics are the double-action pump and the "Hopkins" process, both which Rouse says he hopes to have ready to fix by the end of the month.

Caradon Consols Mine.—The main lode has been cut in this mine thirteen fathoms south of the engine-shaft, and about twenty-eight fathoms from the surface; it is about two feet wide, and said to be of the same nature as the lodes in the South and West Caradons.

MINE ACCIDENTS.

North United Mines.—M. Richards, while imprudently remaining under the balance-bob, it descended, and crushed him in a dreadful manner.

Melancholy Accident at the Cwm Celyn and Blaina Iron-Works.—On Saturday last, between four and five o'clock in the morning, as four colliers were proceeding to their work, having descended through the horse road or drift, and having occasion to pass the bottom of the pit they were horror-struck at finding the bodies of two men in a dreadfully mutilated state upon the pit-carriage, which they soon recognised as those of Henry Greenaway and William Williams. It was ascertained that they left their homes between two and three o'clock, for the purpose of going to work, and that they were in the habit of descending the pit by sliding down the guide-rods, instead of going through the drift; and, in all probability, the second who got up the rod lost his hold, and so knocked the man beneath him off, by which both perished. The depth of the pit was sixty-one yards, and the bodies were completely smashed. Williams leaves a widow and three small children.

Willenhall.—J. Bunn was killed by an empty skip falling on him, while ascending the shaft of an ironstone pit, at Monmore.

Safety Lamps—Dr. Reid Clanny.—A perusal of the following extracts from an authenticated document, under the immediate superintendence of Baron Beust, chief director of all the mines belonging to the King of Saxony, will, we trust, be found to be interesting to our readers in this district. The committee for the inquiry consisted of two professors of the Mining Academy and the chief engineer. "Dr. Reid Clanny's claim (say they) of being the first who invented a safety lamp in England, is acknowledged as indisputable. * * Dr. Clanny's safety lamp affords more security than that of Sir H. Davy, and is superior to the safety lamps in use—particularly in horizontal currents of air. * * Dr. Clanny's lamp appears to be good, durable, and sufficiently protected against ordinary accidents." The document was transmitted to one of our correspondents by Baron Ende, and is dated "Altjessnitz, Prussian Saxony, 15th July, 1845."—*Gateshead Observer.*

Copper and Lead Ores in South Australia.—We announced in our last the discovery of copper and lead ores upon the South Australian Company's lands at Rapid Bay. We have since learnt that simultaneously with that discovery, copper ore was found on the company's lands, adjacent to their township of Noarlunga. Mr. Parramore, who pronounces upon its great importance at a first glance, is a gentleman who has had considerable experience in the mining world, having been long and largely engaged in British mines, as well as upon the continent of Europe; and who, we are pleased to learn, has been urged to visit this colony by some highly influential friends in Van Dieman's Land, from whom he is the bearer of the most flattering testimonials. Mr. Giles, the company's manager, has liberally availed himself of Mr. Parramore's services; and, as a further encouragement, is to give him half the net profits for one year—a mode of reward, or remuneration, for mineral discoveries which it has been determined to adopt generally on behalf of the company, and one which is likely to stimulate many explorers. We have reason to believe that Mr. Parramore's advices to his friends in Van Dieman's Land have been such as cannot fail to afford them much gratification. In our little mining world Mr. P. has created a great stir; and as the Noarlunga district is almost unbroken ground for the miner, the vigorous commencement of mining operations there is quite an event.—*Adelaide Observer*, Feb. 8.

Anthracite Coal in the United States.—Mr. T. S. Ridgway, mining engineer, Philadelphia, has furnished a description of the district, known as the first anthracite coal basin of Pennsylvania, embracing the Schuylkill coal region. The basin, which is situated upon the head waters of the Schuylkill and Swatara rivers, is in length about 65 miles, and breadth at Pottsville, 4½ m., at Port Carbon 4½ m., at New Philadelphia and Middleport 2½ m., at Patterson and Tuscarora 2 m., at dividing ridge between Tuscarora and Tamaqua 1½ m., at Tamaqua 1½ m., at the mouth of Dry Run 1½ m., at Mauch Chunk 1½ m., Room Run 1½ m. Breadth at west branch of Schuylkill 5 m., at west branch 5½ m., at dividing ridge or east branch of Swatara 5 m., Swatara Creek 2½ m., at Raush Creek and Good Spring Creek 2¾ m., at Lorberry Creek 1¾ m., at Fishing Creek 2 m., near end of south fork of basin 1¼ m., at head waters of Good Spring Creek 1 m., outlet at Bear Creek (or north-west fork of basin) 1m. —"In giving a descriptive outline of this basin, I shall commence at the Dauphin county line, at the south-eastern edge of the basin, where the red shale and conglomerate rocks come in contact and conform in their line of strike (course) along the top of the Sharp Mountain, varying in direction from a course of N. 75 deg. E. to N. 81 deg. E., until interrupted by the great bend in the ridge opposite the town of Patterson, which extends for a short distance north-west, north, and north-east, and thence bears off in a line with the Tuscarora Mountain, Mauch Chunk Mountain, and sweeping around Mauch Chunk Mines into Northampton county, thence resuming its course again in a north-easterly direction, as far as Room Run Mines, passing around these mines, a short distance east of them, and extending back along the top of Panther Mountain to Mine Hill and Broad Mountain range of rocks, taking in the Newcastle and Coalcastle basin, thence extending along Broad Mountain and Mine Hill into Dauphin county, striking Bear Mountain, and extending along the top of this mountain, near to the great bend of Wisconisco Creek, returning on the top of Big Lick Mountain, and sweeping around Berry's Mountain to fourth or Short Mountain, extending along the top of this mountain, near to Port Lyon, on the Susquehanna River, thence returning along the top of Sharp Mountain to the place of beginning, at the Dauphin county line, closing within its boundaries about 90,000 acres of coal, iron ore, and timber land."

Continental Iron-Works.—The already very extensive and greatly-increasing demand for iron, both in England and on the Continent, is expected, notwithstanding the vastly-extended operations at the furnaces in Scotland, Wales, and Staffordshire, to occasion, during the current year, a very great deficiency in the supply, and although the price of this metal has nearly doubled in a short period, a still further increase is expected. The iron made from *coal* in France is of an inferior quality, totally unfitted for railway and other engineering works, and so fearful are the Government of the entire disforesting of the kingdom, if charcoal iron-works are carried on to any extent, that the amount to which they raised the price of forest wood amounts to an entire prohibition, and she is, of necessity, therefore compelled to import from Sweden, Great Britain, &c. These circumstances have suggested the idea of forming an establishment at Boulogne-sur-Mer, for the make of iron, and the manufacture of fire brick and pottery from ores, coal, and clay, to be imported from Wales. Mr. R. Hopkins, possessing several mines of these materials, proposes to erect the necessary works, on an eligible site of ground, already secured, and to supply the ores, coal, clay, &c., which is considered as equal to 50,000*l.*, or half the capital required. 100,000*l.* is considered sufficient for all purposes, which it is proposed to raise by the issue of 2000 shares of 50*l.* each, Mr. Hopkins taking half that number; the works to be put into active operation as soon as 500 shares are subscribed for; 5 per cent. per annum to be paid the shareholders after the expiration of two years, third year 6, fourth 8, and fifth and following years, if profits allow, 10 per cent., per annum; but they are to be guaranteed 6 per cent. after the expiration of two years, holding as security, by deed, the property on the works. It is proposed to adopt every improvement in the works which has been discovered, to economise the make of iron, by casting at once from the furnace, and by the furnaces employed for the manufacture of coke, to bake fire brick and pottery, thus perfecting two important results under one operation. The sanction of the Minister of Commerce having been obtained, no obstacle is in the least expected from the French Government.

South American Company.—The object of this company is fourfold—namely, to establish steam navigation up the Amazon, and its tributaries, into provinces abounding with mineral, and productions of *genera*—unknown to Europeans—to make settlements on the banks of the Beni—and to promote colonization and mining. The Amazon can be navigated for over 2000 miles, affords great facilities for the same, and would, in itself, be a most important and profitable undertaking. The river Beni flows through a most fertile country, which has been judiciously selected for the first settlement. It is also proposed to lessen the voyage to China, New South Wales, &c., one-half, by railways from the settlements to Arica, in Peru, effecting a junction with the river navigation, and thus opening the much-talked-of and anxiously-coveted pas-

sage to the Pacific. This company is patronised by the Governments of the Brazils, of Bolivia, Equador, and Peru, and special grants have been made for its establishment, so that there is every prospect of its being brought to maturity without unnecessary delay. Its objects are of unquestionable importance, and calculated to work out changes in the south of America, at once stupendous and useful, by developing the natural resources of the country, creating a desire for the productions of more refined nations, and supplying the wants thus generated by the inventions of science and mechanical industry. We shall return to this subject.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Bank Stock, 210½ 11	Russian, 5 per Cents., 117¾ 18
3 per Cent. Reduced Ann., 99 ½	Spanish, 5 per Cents., 27 6⅞
Consols for Account, 98⅞ ¾	ditto, 3 per Cents., 38 7⅞
Exchequer Bills, 52 54 pm	Brazil, 5 per Cents., 91
Belgian, 4½ per Cents., 100½ 100	Chili, 6 per Cents., 103
Danish, 3 per Cents., 89½	Colombia, 6 per Cents., 17¾ ½
Dutch, 4 per Cents., 99¾ ½	Mexican, 5 per Cents., 36⅞
Portuguese, Conv., 5 per Cents., 65½ ¼	Peru, 6 per Cents., 36 ½

SHARE MARKET.

MINES.—Notwithstanding the determination shown by the Lords, in their decision on the Dublin and Galway bill, closely to investigate every railway speculation that comes before them, by far the greatest part of the capital employed in the purchase of shares is still devoted to these undertakings. In mining shares scarcely anything is doing. Messrs. Lamond's periodical sales of mine shares, which take place on Tuesdays, are almost deserted, while at one o'clock, when the sale of railway shares commences, the room is crowded. The want of competition at these mining sales causes them to be bought in far below their market value, and thus a fictitious price is given to the public.

RAILWAYS.—This has been a busy week in railway speculations both in the city and in the country. The throwing out of the Dublin and Galway bill by the House of Lords, has created no little sensation among the jobbers in Irish railways. The resolution come to by the House of Commons, that the deposits henceforth shall be 10 per cent., instead of 5 per cent., to comply with the Standing Orders, has had very little influence on the market, as it cannot affect those bills that have already passed, the groups, for the present session, in both Houses, being at last drawn to a close: so that the new orders will only operate on those bills that will be resumed for next session. The Brighton, Blackwall, and South Midland, have been improving, and good business doing, particularly the two former, which have increased 1*l.* per share. The London and Birmingham, and the Midland Companies, propose to make an arrangement for a lease of the North Midland and the Leicester and Bedford lines, which has caused a re-action in those scrips. The line from London to Cambridge, and thence to Ely, and from Norwich to Ely, was opened with due ceremony on Wednesday, and promises to answer well the expectations of the company. It was expected that there would be a few defaulters on the settlement of the account in railway shares on Thursday; but there was no lack of money, and they have been for the most part completed without any difficulty. Money has been in fair demand, but not at high rates; and the shares of the established lines, with the exception of midland stock, maintain their firmness. The London and York line has the quotation of 3¾ to 4 premium, while the Direct Northern is at a discount of about ½ per share. The Cambridge and Lincoln are firm at 1⅝ to 2 premium. The scrip of the Leicester and Bedford line are 2⅛ to ⅞ premium; and its rival, the South Midland, are quoted at 3¾ to 4 premium. In foreign railways a good business has been doing; but it is evident, on the whole, there is not that speculative impulse as there was a month or two ago in railway schemes. The following bills have been declared to have complied with the Standing Orders of the House of Lords:—London and Croydon Extension; Bolton and Leigh, and Kenyon and Leigh Amalgamation; as well as the Glasgow Junction, Manchester and Leeds, Leeds and Bradford Extension (Shipley to Colne), Oxford and Rugby, and Worcester and Wolverhampton, &c., read a third time and passed, which close the number of bills before the House for this session. Last evening in the House of Commons, on Viscount Courtenay moving the report of the consideration of the committee on the London and York Railway bill, Mr. Ward, pursuant to notice, moved that the bill be recommitted, on the grounds that evidence had not been heard on behalf of the line, and that the committee had decided without a proper investigation of the case. Mr. Hutt seconded the motion, and thought the House had good reason to be dissatisfied with the decision of the committee; with the overwhelming business they had had to contend with, he did not wonder at their physical strength giving way; but, whatever was the cause, their proceedings were scarcely consistent with the rules of Parliament, or the justice of the case. Lord Courtenay, as chairman, explained; and, after some further observations, the House divided, when there appeared a majority of 60 in favour of the confirmation of the report.

As the traffic on all the established lines of railway appears to be on a gradual and steady increase, the comparisons with corresponding periods of the previous year become particularly interesting; we have, therefore, extended our weekly statement, by giving the total for the six months to this date, and the six months up to the same period last year, besides a statement of the weekly returns for each period—viz.:

Name of Railway.	*Last week.*	*Last year.*	*Tot. this ½-yr.*	*Last yr.*	*Increase*
Chester and Birkenhead	£883	£584	£2357	£1821	£536
Eastern Counties	5765	5204	16194	14876	1318
Edinburgh and Glasgow	3380	2570	8827	7406	1421
Glasgow and Greenock	1544	1346	3971	3450	521
Glasgow, Paisley, and Ayr	2571	1586	6455	5027	1428
Grand Junction	11054	9775	31993	27184	4809
Great Western	19456	18461	56909	53452	3457
Liverpool and Manchester	8552	6243	21689	16954	4735
London and Birmingham	22001	19641	73555	56088	17467
London and Brighton	5801	4864	16971	13657	3314
London and Croydon	828	611	2480	1660	820
London & South-Western	10644	8531	28588	24651	3937
Manchester & Birmingham	4014	3274	11240	9912	1328
Manchester, Bolton, & Bury	964	930	2980	2703	277
Manchester and Leeds	7005	6439	20695	19022	1673
Midland Company	16869	14218	46100	37903	8197
Newcastle and Carlisle	1667	1901	5538	3670	—
North Union	1875	1703	5560	4808	752
Preston and Wyre	823	565	2458	1632	826
South-Eastern and Dover	7546	5276	22931	15288	7643

The following are the prices obtained by Messrs. Lamond, on Tuesday last:

MINES.—Blaenavon, 20*l.*; George and Charlotte, 10*l.*; Wheal Crebor, 9*l.*; Santiago, 21*l.*; Wheal Mexico, 5*l.*; West Holmbush, ½*l.*; Tretoil, ⅜*l.*; Cobre, 18*l.*; Tamar, 8*l.*; Anglo-Mexican, 2*l.*; Tincroft, 10*l.*; South Caradon, 600*l.*; Wheal Elizabeth, 3*l.*; Old Harrowbarrow, 1½*l.*; West Wheal Concord, ¾*l.*; Caradon United, 10*l.*; Wheal Concord, 10*l.*; Imperial Brazilian 5*l.*; Callington, 30*l.*; Crease, 5*l.*; Wheal Mary, 5*l.*; Lamarhooe Wheal Maria, 3*l.*; Condurrow, 15*l.*; Wheal Norris, 20*l.*; Caradon Wheal Hooper, 8*l.*; Wheal Salisbury, 8*l.*; Wheal Albert, 3*l.*; Wheal Newton, 7*l.*

RAILWAYS.—Armagh, Coleraine, and Portrush (1⅛*l.* pd.), 1⅞*l.*; Caledonian Extension (2½*l.* pd.), 2*l.* 13s.; Worcester, Tenbury, and Ludlow (2¾*l.* pd.), 2¾*l.*; Welsh Midland (2½*l.* pd.), 3⅝*l.*; Diss and Colchester (1*l.* pd.), 1⅝*l.*; Whitehaven and Furness (1*l.* pd.), 2*l.* 15s. 6d.; Shrewsbury and Trent Valley Union (1*l.* 2s. pd.), 3*l.* 0s. 6d.; Leicester and Bedford (1*l.* 2s. pd.), 3*l.* 9s.; Italian and Austrian (3*l.* pd.), 4*l.*; Lyons and Avignon (2*l.* pd.), 3½*l.*; Paris and Lyons, Lafitte's, (2*l.* pd.), 3*l.* 15s. 6d.; Dendre Valley (2*l.* pd.), 2*l.* 2s.; Orleans, Tours, and Bourdeaux (4*l.* pd.), 10*l.* 14s. 6d.; Boulogne and Amiens (6*l* pd.), 10*l.* 19s.; West Flanders (2*l.* pd.), 4*l.* 11s. 6d.; Midland (100*l.* stock, pd.) 183*l.*; London and York (2*l.* 10s. pd.), 6*l.* 12s.; Caledonians (5*l.* pd.), 10*l.* 11s 6d.; North Stafford, Churnet Valley, and Potteries (1*l.* 2s. pd.), 4*l.* 18s. 6d.; Great Western and Wycombe (1*l.* pd.), 1*l.* 7s.; Canterbury and Dover (1*l.* 7s. 6d.), 1*l.* 18s.

MISCELLANEOUS.—Milton Canal (100*l.* pd.), 110*l.*; Oakham ditto (130*l.* pd.), 65*l.*; Oxford ditto (100*l.* pd.), 360*l.*; Royal Farmers' Assurance (1*l.* pd.), 10*l.*; National Bank of Ireland (17½*l.* pd.), 20*l.*, London Gas (50*l.* pd.), 55*l.*

The following are Friday's prices:—City and Camden Town (1⅜*l.* paid), 1*l.* 3s. 6d.; Canterbury and Dover (1⅜*l.* pd.), 1*l.* 14s. 6d.; Waterford and Kilkenny (1*l.* pd.), 2*l.* 13s. 6d.; Coventry and Leicester (1½*l.* pd.), 1*l.* 13s.; East Indian (½*l.* pd.), ¾*l.*; Diss and Colchester (1*l.* pd.), 1*l.* 13s.; Belfast and Ballymena (2½*l.* pd.), 6*l.* 12s.; East Lincolnshire (1½*l.* pd.), 1*l.* 19s.; Whitehaven and Furness (1*l.* pd.), 2*l.* 17s.; London and York (2½*l.* pd.), 6½*l.*; Manchester and Leeds (76*l.* pd.), 192½*l.*; Liverpool, Ormskirk, and Preston (2½*l.* pd.), 5*l.* 6s.; North British (12½*l.* pd.), 27*l.*; Birmingham and Gloucester (100*l.* pd.), 132*l.*; Stockton and Hartlepool, new (25*l.* pd.), 27½*l.*; Dutch Rhenish, 8*l.* 17s.

MISCELLANEOUS.—Bank of British North America, 49½*l.*; Thames Plate Glass Company, 118*l.*; Van Dieman's Land Company, 9*l.*; Grand Junction Canal (half shares), 57*l.*

LEEDS, THURSDAY.—The market has continued very buoyant during the week, and prices have been well maintained. Midlands are scarcely so firm since the meeting, the old shares being at 181*l.* ex div., and the 40*l.* shares at 28½*l.* It is by no means improbable that the decision in favour of the London and York may be returned to the committee by the House of Commons, on the ground that it has been come to on *ex parte* evidence; the Portsmouth Atmospheric may also be re-committed for the same reason, but not so justly as in the former instance; this circumstance has caused Croydons to flag, and they are now at 26¾*l.*—they were at 28½*l.* early in the week. We do not suppose that the present depression will be more than temporary. Brightons are strong at 80*l.*; Manchester and Leeds have run up as high as 112*l.* premium, probably in anticipation of an agreement being come to between the companies competing for the making of the West Riding lines; a very favourable proposition has been made to the West Yorkshire by the Manchester and Leeds, and West Riding Junction Companies, which we consider the shareholders would be most unwise to refuse, as its acceptance would have the effect of enhancing the value of their property 3*l.* or 4*l.* per share, and secure for the district the adoption of the most efficient and useful system of railway communication. Leeds and Thirsks have firmly maintained their price during the last day or two; we quote them at 90s. premium. Leeds and Dewsburys are flat at 20*l.* per share. Halifax and Bradford Unions have run up to 80s. premium. Wakefield and Harrogate to 70s., and Wakefield and Bradford to 60s. premium; the first of these stocks has been largely "beared," and will probably go higher; the second and third will not, we believe, improve much on present prices.

R. B. WATSON, TOOTAL, & BARFF.

HULL, THURSDAY.—The market for all the old lines has, during the past week, been firm and buoyant, referable to the splendid appearance of the growing crops, and to the prestige of good news, dividends, and new shares at the forthcoming half-yearly meetings. As the old lines rarely travel to an inordinate premium from the better class of new ones, it is perhaps only fair to assume, should no unfavourable circumstance intervene, we are likely to reach in a month or two higher prices for these latter. At all events, the feeling for all sound and well-conducted undertakings is decidedly good, although the temptation for investors at low rates is, in many cases, too strong to prevent realising. London and Yorks, North British, and Rugbys, have been the most current stocks of the week. To-day the first-named are not quite so strong; for North British on the other hand, we have to note an improved feeling; Rugbys are exactly 37s.

LATEST PRICES OF IRISH STOCKS.—3 per Cent. Consols, 99½*l.* to 99*l.*; 3½ per Cent. Stock, 101⅝*l.* to 101¾*l.*; 3½ per Cent. Debentures, 93⅞*l.*; Long Annuities, —*l.*—Hibernian Bank, 31½*l.*; Royal Bank, 13¾*l.*; National Bank, 20*l.*—Armagh, Coleraine, and Portrush Railway, 2*l.*; Belfast and Ballymena, 6½*l.*; Cork and Bandon, 7½*l.*; Cork and Waterford, 1⅝*l.*; Dublin and Belfast Junction, 8⅞*l.*; Dublin and Drogheda, 107*l.*; Dublin and Kingstown, 250*l.*; Great Southern and Western, 23*l.*; Irish Great Western, 2½*l.*—Mining Company of Ireland, 14½*l.*—Wicklow Copper Mine, 18½*l.*—British and Irish Steam, 53*l.*; Dublin and Glasgow ditto, 44*l.*; Peninsular and Oriental Company, 37*l.*

COPPER ORES

Sampled July 16, and Sold at Tyack's Hotel, Camborne, July 31.

Mines.	*Tons.*	*Price.* £	s.	d.	*Mines.*	*Tons.*	*Price.* £	s.	d.
East Wh. Crofty	102	£11	0	6	Grambler St. Aub.	56	1	17	6
ditto	101	6	4	6	ditto	41	4	8	6
ditto	90	6	3	6	South Wh. Basset	67	3	18	6
ditto	65	2	15	6	ditto	66	3	9	6
ditto	62	2	8	0	ditto	57	6	14	6
ditto	61	4	16	6	ditto	50	4	11	6
ditto	49	1	12	6	ditto	32	11	14	6
ditto	35	5	17	6	Dolcoath	89	7	14	0
Longclose	56	7	1	0	ditto	69	6	8	6
ditto	32	6	17	6	ditto	54	1	17	0
Tincroft	70	5	6	6	ditto	52	4	4	6
ditto	62	4	14	6	Lanivet Consols	115	4	4	0
ditto	56	6	1	0	ditto	95	8	9	0
ditto	54	4	18	6	Fowey Consols	83	4	10	6
ditto	49	5	2	6	ditto	79	6	7	0
ditto	41	8	8	6	Treviskey	86	6	13	6
ditto	38	14	2	0	ditto	35	9	3	0
ditto	37	12	16	0	East Pool	52	5	13	0
ditto	33	6	3	0	ditto	48	6	4	0
ditto	32	9	1	6	Wh. Vyvyan	50	1	4	0
Camborne Vean	77	7	4	6	ditto	35	7	6	0
ditto	73	4	12	0	Wh. Trewavas	69	5	7	6
ditto	62	6	11	0	Godolphin	36	6	10	0
ditto	61	5	3	6	ditto	28	20	1	0
ditto	58	1	16	0	ditto	1	33	0	0
ditto	50	7	18	6	Barrier	59	5	4	0
Stray Park	34	5	1	6	Tretoil	46	5	5	6
Grambler & St. Aub.	62	5	17	6	Condurrow	40	4	9	6
ditto	58	6	18	6	West Wh. Maria	12	4	19	6
ditto	57	5	8	6					

TOTAL PRODUCE.

		£	s.	d.			£	s.	d.
East Wh. Crofty / Longclose	653	£3832	11	6	Treviskey	121	£894	6	0
Tincroft	472	3369	15	0	East Pool	100	591	8	0
Camborne Vean / Stray Park	415	2287	2	0	Wh. Vyvyan	85	315	10	0
Grambler & St. Aub.	274	1361	11	0	Wh. Trewavas	69	370	17	6
South Wh. Basset	272	1479	12	0	Godolphin	65	828	8	0
Dolcoath	264	1448	4	6	Barrier	59	306	16	0
Lanivet Consols	210	1285	15	0	Tretoil	46	242	13	0
Fowey Consols	162	877	4	6	Condurrow	40	179	0	0
					West Wheal Maria	12	59	14	0

Average standard, 111*l.* 6s.—Average produce, 7¾.—Average price per ton, 5*l.* 17s. 6d.—Quantity of ore, 3319 tons.—Quantity of fine copper, 259 tons 4 cwt.—Amount of money, 19,730*l.* 8s. 0d.—Average standard of last sale, 113*l.* 13s. 0d.—Average produce ditto, 7.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount. £	s.	d.
Mines Royal Company	213	£1376	4	6
English Copper Company	439	2575	0	9
Vivian and Sons	444½	2131	4	0
Freeman and Co.	530½	2926	14	0
Grenfell and Sons	519	3815	2	3
Crown Copper Company	77½	228	19	3
Sims, Willyams, Neville, Druce, and Co.	499	3101	13	9
Williams, Foster, and Co.	596½	3575	9	6
Total	3319	£19,730	8	0

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea Mines 476—Wheal Prosper 441—United Hills 265—Par Consols 245—Trenow Consols 224—Wheal Brewer 212—Wheal Darlington 193—West Wheal Jewel 188—Fowey Consols 163—Wheal Providence 150—Wheal Seton 125—Wheal Virgin 108—Wheal Comfort 25—North Tolgus 24—Wheal Alice 22—Wheal Hope 5.—Total, 2866 tons.

NO SALE on Thursday week, August 14.

COPPER ORES

Sampled on the 9th of July, and sold, on the 30th July, at Swansea.

Mines.	Tons.	Prod.	Stand.	Price. £	s.	d.	Mines.	Tons.	Prod.	Stand.	Price. £	s.	d.
Cobre	124	12¾	92¼	£9	10	6	Chili	43	44½	89½	£37	8	6
ditto	123	12⅞	93⅞	9	14	0	ditto	40	43½	89	36	9	6
ditto	114	12⅞	93⅞	9	16	6	ditto	39	45½	89	38	4	6
ditto	48	12⅞	93	9	12	0	ditto	36	43⅞	88½	36	7	6
ditto	95	22⅞	88⅞	17	12	6	Knockmahon	81	9¼	105⅞	7	10	6
ditto	92	23¼	88	18	6	6	ditto	70	7	111	5	10	6
ditto	85	22¼	88⅞	17	7	6	Bearhaven	104	9⅞	105⅞	8	1	0
ditto	71	22½	87⅞	17	7	6	Bacuranao	75	10⅜	98⅞	7	17	0
ditto	48	22⅞	87⅞	17	7	6	Ballymurtagh	52	5⅞	115½	4	10	6
Chili	52	55	89	46	12	6	Glasgow Slag	49	2⅞	132⅞	1	8	0
ditto	51	53½	88½	44	17	0	Molland	6	12⅞	99	9	17	6
ditto	50	18⅞	94½	15	6	0	ditto	4	7½	108⅞	5	12	0
ditto	48	50¼	88½	42	2	0	American	4	16½	94	13	5	0

TOTAL PRODUCE.

		£	s.	d.			£	s.	d.
Cobre	800	£10859	16	6	Ballymurtagh	52	£235	6	0
Chili	359	13366	4	0	Glasgow Slag	49	68	12	0
Knockmahon	151	996	5	6	Molland	10	81	15	0
Bearhaven	104	837	4	0	American	4	53	0	0
Bacuranao	75	588	15	0					

Total tons, 1604.—Total amount, £27,086 18s. 0d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount. £	s.	d.
English Copper Company	188	£2080	17	0
P. Grenfell and Sons	158	5868	11	0
Sims, Willyams, Nevill, Druce, and Co.	391	6904	15	6
Vivian and Sons	295	2311	5	0
Williams, Foster, and Co.	458	8801	8	6
Mines Royal Company	114	1120	1	0
Totals	tons 1604	£27,086	18	0

Copper ores for sale August 13.—Cobre 105—100—94—90—67—82—27. Bearhaven 121—96—95—89—60—12. Santiago 120—114—109—94. Knockmahon 97—71—70—67—62—57. Cuba 110—82—76—48—41—31. Chili 50—46—44—38—52—50. San Jose in Cobre 80—55—38—28. Ballymurtagh 88—44. Australian Kapunda 50—43—33. Llandidno 51—30. Cronebane 53—22. Tigrony 15. Kilduanne 72—3. Laxey 42. Aberdovey 24—1. Molland 2—1.—Total, 3342 tons.

THE QUARTERLY SALE OF COPPER ORES IN CORNWALL.—Copper ores, 40,844 (21 cwts).—Fine copper, 3294 tons 17 cwts.—Amount of money, 226,373*l.* 3s.—Average standard, 102*l.* 16s.—Average produce, 8 and 1-16th.—Average price per ton, 5*l.* 11s.

LATEST CURRENT PRICES OF METALS.

LONDON, AUGUST 1, 1845.

	£	s.	£	s.	d.		£	s.	£	s.	d.
IRON—Bars..Wales..*ton*	0	0—	7	10	0	TIN—Com. blocks *g*..*cwt.*	0	0—	4	10	0
„ ..London ..	0	0—	8	10	0	„ bars	0	0—	4	11	6
Nail rods „	0	0—	9	0	0	Refined	0	0—	4	15	0
Hoop (Staf.) „	0	0—	10	5	0	Straits *h*	4	2—	4	3	0
Sheet „ „	0	0—	11	10	0	Banca	4	5—	4	6	0
Bars „ „	9	10—	10	0	0	TIN PLATES—Ch., IC *i*, *box*	1	13—	1	14	0
Scotch pig *b*, Clyde	3	0—	3	3	0	„ IX	1	13—	2	0	0
Russian, CCND *c*	0	0—	——			Coke, IC	1	6—	1	7	0
„ PSI	0	0—	——			„ IX	1	12—	1	13	0
„ Gourieff	14	5—	14	10	0	LEAD—Sheet *k* ..*ton*	0	0—	20	5	0
„ Archangel	0	0—	——			Pig, refined	21	0—	21	10	0
Swedish *d*, for arriv.	11	0—	11	10	0	„ common	18	15—	19	0	0
„ on the spot	0	0—	——			„ Spanish, in bd.	0	0—	——		
„ Steel, fagt.	16	5—	16	10	0	„ American	0	0—	——		
„ „ kegs *e*	15	5—	15	10	0	SPELTER—(Cake) *l*	24	0—	24	10	0
COPPER—Tile *f*	0	0—	87	10	0	ZINC—(Sheet) *m* export.*	0	0—	30	0	0
Tough cake	0	0—	88	10	0	QUICKSILVER *n* ..*lb.*	0	0—	0	4	6
Best selected	0	0—	91	10	0						
Ordinary sheets, *lb.*	0	0—	0	0	16						
„ bottoms	0	0—	0	0	11	REFINED METAL ..*ton*	0	0—	7	2	6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto 2½ per cent. *e* In kegs ¾ and ⅝-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

(*For continuation of Metal Table see Fourth Page.*)

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
235	Andrew and Nangiles	23	70
96	Bell	—	10
4000	Bedford	2½	5½
100	Botallack	175	450
10000	New British Iron, regis.	10	25 6
—	Ditto ditto, scrip	10	20½
8000	Blaenavon	50	32
120	Brewer	—	45
128	Budnick Consols	—	35
100	Bwlch Cwmerfin	20	60
100	Barristown	17	300
5000	Con. Tretoil Mining Ass.	2½	½
128	Cosheen	20	200
114	Charlestown	—	300
3200	Cornubian Lead Co.	3	2½
128	Comfort	—	35
2560	Cook's Kitchen	—	8
1000	Carn Brea	15	80
1000	Callington	18	25
256	Caradon Wh. Hooper	3	10
128	Caradon Consols	45	150
256	Caradon Copper Mine	1½	5
128	Caradon Mines	3	60
256	Caradon United	16	16
128	Creeg Braws	120	100
1900	Combmartin	5½	10
240	Craddock Moor	3	70
128	Condurrow	10	22
186	Dolcoath	—	90
1000	Dhurode	2	5
10000	Durham County Coal	45	9
128	East Pool	5	52½
94	East Wheal Crofty	—	450
128	East Wheal Rose	50	1600
—	East Wheal Albert	1	5
256	East Wheal Alfred	2	10
9000	East Tamar Consols	1	3
512	Fowey Consols	—	110
244½	Grambler & St. Aubyn	—	75
100	Great Consols	1000	500
1000	Godolphin	—	35
256	Gonamena	6	120
256	Green Valley	17	5
20000	Galvanised Iron Co.	10	11¾
100	Grogwinion	5	20
4000	Gunnis Lake	1	3
128	Gover	23	200
10000	Hibernian	12½	1
1000	Holmbush	14	26½
128	Hallenbeagle	—	50
1000	Hanson	5	3
800	Hawkmoor	2	4½
1000	Harrowbarrow Consols	1¾	3
160	Levant	—	150
128	Lanarth & Penstruthal	—	150
1000	Lewis	5	6
128	Ludcott	3	3
256	Lambo	5	13½
20000	Mining Co. of Ireland	7	14½
2800	Marke Valley	10	5
200	Nanterrow Consols	10½	27½
70	North Roskear	—	610
200	North Holmbush	—	15
100	North United	38	45
256	North Wheal Rose	22½	50
256	North Treburget	1	5
100	North Pool	11	20
15000	Northern Coal Co.	23	2
128	North Wh. Providence	1¾	9
600	Old Delabole Slate Co.	25	45
128	Par Consols	—	770
256	Penhallow Moor	15	10
128	Pen-y-Cefn Mine	50	55
100	Penrhiw	30	65
10000	Rhymney Iron	50	30
256	Rose Consols	10	7
1000	Rosewall Hill	1	2½
2500	Silver Valley	2	2
800	South Towan	10	1½
280	Spearn Moor	20	—
1000	Stray Park	43	20
128	South Wheal Basset	—	250
128	South Caradon	5	600
124	South Wh. Francis	—	50
256	St. Austell Consols	4	10
256	South Wheal Rose	2	3
128	South Yeoland	11½	25
256	South St. George	7½	21
120	Trethellan	5	80
128	Trewavas	—	45

BRITISH MINES—*continued.*

Shares.	Company.	Paid	Price.
96	Tresavean	10	300
128	Tokenbury	102	90
256	Trenow Consols	—	130
120	Treviskey and Barrier	61	250
5000	Treleigh Consols	5½	3½
9600	Tamar Consols	3	8
6000	Tincroft	7	13
128	Trewellard	12	25½
1024	Trelawney Consols	½	2½
256	Ting Tang	17	31
4000	United Hills	5	5½
100	United Mines	1000	900
6000	Wicklow Copper	5	18½
512	West Fowey Consols	40	35
384	Wheal Franco	20	65
128	Wheal St. Andrew	65	20
127	Wheal Virgin	—	20
256	West Caradon	40	375
3845	West Wheal Jewel	10½	3½
120	West Trethellan	5	40
128	Wheal Rose	40	20
256	West Wheal Tolgus	6	10
1000	Wheal Harriet	[illegible]	2½
128	Wheal Penrose	—	5
128	Wheal Providence	16	150
68	Wheal Clifford	—	500
256	Wheal Albert	10	12
128	West Basset	10	80
128	Wheal Acland	13	14
256	Wheal Sisters	45½	90
99	Wheal Seaton	150	400
200	West Seaton	—	35
128	Wheal Henry	—	20
110	Wheal Hope (Zennor)	14	18
256	Wheal Hope	7	5
4000	Wheal Martha Consols.	3	3½
130	Wheal Trelawny	15	256
256	Wh. Mary Ann	5	40
256	Wheal Norris	6½	10
256	Wheal Trevenna	4	4
107	Wheal Trevilson	10	5
128	Wheal Catherine	5½	14
256	West Providence	—	7½
256	Wheal Robins	13	10
256	West Wheal Treasury	12	5
256	West Wheal Shephard.	2	10
128	Wheal St. Cleer	17½	40
128	Wheal Reeth	1	60
128	Wheal Gill	17½	20
128	West Cargoll	2	15
256	Wheal Mary	1	5
256	Wheal Concord	4	10
128	Wheal Venland	2½	10½
256	West Wh. Friendship	—	5
128	Wheal Prospect	4	9
256	Wheal Victoria	2	10
240	Westerlake	3	3
1024	Wheal Maria	1	500
256	Wheal Fortescue	1½	25
256	West Wh. Maria	—	22½
128	Wheal Pollard	3	20
512	Wheal Sarah	2½	—
256	Wh. Cleveland	2½	5
256	Wh. Mexico	2	9
256	Wheal Boscastle	3½	9

FOREIGN MINES.

Shares.	Company.	Paid	Price.
5000	Alten Mining Company	14½	2
15000	Asturian Mining Co.	5	3½
10000	Anglo-Mexican Co.	100	3
3374	Ditto Subscription	25	4
2000	Bolanos	150	6½
12000	Ditto Scrip	15	5½
10000	Brazilian Imperial	21	5½
10000	Cata Branca (Braz. Co.)	6½	—
12000	Cobre Copper Co.	40	19½
8500	Colombian Co. regis.	55	4½
5000	Ditto Scrip	—	
10000	Copiapo Mining Co.	14	2½
20000	General Mining Ass'n.	20	14½
5051	Mexican Company	50	6
12000	Mocaubas & Cocaes	25	4½
29320	Rl. del Monte, regis.	28½	3½
	Ditto unregistered		4½
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	117
7000	Royal Santiago	10	23½
2000	Pachuca Mines	3	10
11000	St. John del Rey	15	8½
43174	United Mexican	28½	4½ ½

RAILWAY SHARE LIST, AND TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Pd. on share.	Val. of Share.	Last Div.	*Traffic Returns.* 1845	1844
Arbroath and Forfar	15	£140,782	20	24½	2½ *p.c.*	£257	£208
Birmingham and Gloucester	55	1,527,267	100	135	4	—	3372
Bristol and Birmingham	90½	——	—	—	4	—	—
Bristol and Gloucester	37½	667,823	30	61	4	—	1015
Chester and Birkenhead	15	520,231	50	60¼	2	938	643
Dublin and Drogheda	32	579,253	60	103	4	965	698
Dublin and Kingstown	6	349,736	100	233½	9	1239	1221
Dundee and Arbroath	17	153,416	25	36½	5	398	331
Durham and Sunderland	19	302,118	50	25½	2	415	489
E. Counties & North. & East.	84	4,090,328	45	21	5	5365	5045
Edinburgh and Glasgow	46	1,686,226	50	85½	5	3378	2559
Glasgow, Paisley, and Ayr	40	1,081,531	50	82½	5	2203	1621
Glasgow, Paisley, & Greenock	23	797,643	25	21	2	1321	1075
Grand Junction	98	2,503,671	100	240	10	12031	9165
Gravesend and Rochester	6	85,000	50	—	5	341	—
Great North of England	45	1,280,076	100	225	6	—	1955
Great Western	118	7,455,689	80	228	8	19835	18927
Liverpool and Manchester	31	1,698,626	100	213	9	9702	6533
London and Birmingham	112½	6,614,996	100	246	10	22504	20741
London and Blackwall	4	1,078,851	16⅔	11½	1½	1435	1701
London and Brighton	51	2,637,753	50	80½	6	6389	5277
London and Croydon	10	797,845	13½	26¼	4	1779	632
London and Greenwich	4	1,038,340	12½	11	—	1107	844
London and South-Western	77	2,604,405	50	80	10	9317	13505
Manchester and Birmingham	31	1,959,062	40	62½	5	4565	3511
Manchester & Leeds & Hull	87	3,972,869	73	181	8	7623	8163
Manchester, Bolton, & Bury	10	792,336	93	169	5¼	982	920
Midland	163	6,259,838	100	191	6	17496	11376
Newcastle and Carlisle	61	1,137,385	100	117	5	1827	1961
Newcastle and Darlington	22½	506,788	24	56	8	2701	1829
Newcastle and North Shields	7	316,869	50	69	6	531	586
North Union, Bolton & Preston	22	1,028,593	100	179	6½	2222	1721
Preston and Wyre	22	432,014	50	32½	2	1077	562
Sheffield and Manchester	19	690,000	87½	133	5	1524	757
South-Eastern and Dover	88	3,773,249	33½	45⅞	3½	8348	5744
Taff Vale	22	595,090	100	135	3	1113	823
Ulster	25	358,353	32	52½	2½	1224	546
Yarmouth and Norwich	20½	250,037	20	29	5	459	834
York and North Midland	53	1,107,146	50	110	10	5626	3001
Paris and Orleans	40	2,082,916	20	48	8	6101	5120
Paris and Rouen	41	1,995,306	20	41½	7½	6492	5920

The following are current prices of Railway Shares, not included in the above Table:—

Name of Railway.	Price.	Name of Railway.	Price.
Aberdeen	3½	North Wales Mineral	16½
Armagh, Coleraine, and Portrush	1⅞	North Wales	3½
Bristol and Exeter	98	Richmond and West End Junction	4⅞
Brighton, Lewes, and Hastings	25½	Rugby, Worcester, and Tring	2⅞
Caledonian	10½	South Wales	5½
Cambridge and Lincoln	2½	South Devon	31
Churnet Valley	6	Scottish Central	6½
Chester and Holyhead	22½	Shrewsbury and Grand Junction	5
Cornwall	2⅞	Shrewsbury, Wolverhampton, &c.	4⅞
Coventry, Bedworth, & Nuneaton	⅞	Staines and Richmond	1½
Coventry and Leicester	1⅞	Scarborough	48
Direct Northern to York	2	Scottish Midland	2⅞
Direct Norwich	½	Trent Valley	18½
Dublin and Belfast	8½	West Yorkshire	2½
Dublin and Galway	2½	Waterford and Kilkenny	2⅞
Dublin and Mullingar	3⅞	Yarmouth and Norwich	29
Ely and Bedford	2⅞	York and Selby	76
Eastern Union	22	Boulogne and Amiens	10⅞
Essex and Suffolk	2½ 3	Bordeaux and Toulouse	2½
Gt. Southern & Western (Ireland)	22	Ditto, Toulouse, and Cette	2
Great Grimsby and Sheffield	5⅞	Dieppe and Paris Junction	1½
Guildford, Farnham, and Portsmouth	3½	Central of France	16½
Kendal and Windermere	4⅞	Great Northern of France (Lafitte's)	6½
Lincoln, York, and Leeds	1½	Lyons and Avignon	2½
London and York	6½	Orleans, Tours, and Bordeaux	11½
Lynn and Ely	6⅞	Orleans and Vierzon	16½
Lynn and Dereham	3½	Paris and Lyons (Ganneron's)	2½
Lancaster and Carlisle	56	Paris and Lyons (Lafitte's)	3⅞
Londonderry and Enniskillen	3½	Paris and Strasburg (Ganneron's)	2½
Londonderry and Coleraine	4½	Paris and St. Quentin	1⅞
Newcastle and Berwick	21	Rouen and Havre	30
Newcastle New (Brandling)	39	Royal North of Spain	1½
Newark and Sheffield	2⅞	Sambre and Meuse	6⅞
Newry and Enniskillen	2⅞	Strasburg and Basle	10
North British	28	Tours and Nantes (Mackenzie's)	2½
North Kent	2⅞	Ditto (Levevres)	4½
Norwich and Brandon	20½	West Flanders	4½

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. [*August 2, 1845.*

The Mining Journal.

No. 519.] ENLARGED SHEET. [AUGUST 2.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY,

ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, whence are steamers to Naples, Genoa, Civeta Vecchia, three times a month. 25

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

SMART'S ELLIPTICAL CONVEX METALLIC FLOATS,

FOR PROPELLING STEAM-SHIPS.—The very great superiority of this invention over the common float, in all points, having been fully proved by the application to various steamers of from 90 to upwards of 200-horses power—the patentee is enabled, with the greatest confidence, to recommend it to the Government and the public generally, and will immediately attend to all applications for license at his residence, No. 5, Grenville-place, Hotwells, Bristol.—June 19, 1845.

Personal attendance to the fitting (if required), on travelling expenses being paid. 26

SUSPENSION BRIDGES.—ANDREW SMITH'S PATENT

GALVANISED WIRE ROPE and CHAIN SUSPENSION, or PARABOLIC TENSION, BRIDGES, are so constructed that the lateral oscillation and vibration (so destructive on the ordinary suspension principle) are entirely prevented by this improvement. For deep ravines or cuttings, the Parabolic Tension Bridge costs much less than those on the suspension principle—piers, &c., being entirely dispensed with. 27

Drawings and models may be seen, and all necessary information had, on application at the offices, White Lion-court, Cornhill; 69, Princess-street, Leicester-square; or at the works, Millwall, Poplar.

PATENT IMPROVEMENTS IN CHRONOMETERS.

WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 28

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

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Established Jan., 1819.—*Empowered by Special Act of Parliament, 7 and 8 Vic., cap.* 48.

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The whole of the PROFITS DIVIDED annually among the MEMBERS, after payment of five annual premiums.

An ample guaranteed capital, in addition to the fund continually accumulating from premiums, fully sufficient to afford complete security.

CREDIT given to MEMBERS for half the amount of the first five annual premiums without security.

CREDIT allowed to MEMBERS for the whole of the first five annual premiums, on satisfactory security being given for their payment.

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Age.	One Year.	Seven Years.	Whole Life.
20	£1 0 9	£1 1 6	£1 13 11
30	1 2 9	1 3 3	2 2 1
40	1 5 6	1 7 6	2 16 4
50	1 15 9	2 1 6	4 1 11
60	3 3 5	3 17 0	6 8 3

Full particulars are detailed in the prospectus. 30

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Nervous Debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay and Co., 63, Oxford-street; Noble, 109, Chancery-lane; Gordon, 146, Leadenhall-street; Purkiss, Compton-street, Soho, London.

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The ELECTRIC TELEGRAPH has been adopted on the following LINES:—

By ORDER OF THE LORDS OF THE ADMIRALTY, on the South-Western Railway as a GOVERNMENT TELEGRAPH from the ADMIRALTY, Whitehall, to PORTSMOUTH, above NINETY MILES.

On the same line, as a Commercial Telegraph from Nine Elms to the Port of Southampton, 77 miles—with a branch to Gosport, 15 miles.

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Yarmouth and Norwich Railway, a "Single Way," 20 miles.

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Part of the Oldham Branch Railway.

Part of the Leeds and Manchester Railway. 34

Part of the Edinburgh and Glasgow Railway.

The Dalkey (atmospheric) Branch of the Dublin and Kingstown Railway.

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In addition to the above, the Telegraph is about to be laid down on several "single lines" in different parts of England, Scotland, and Ireland.

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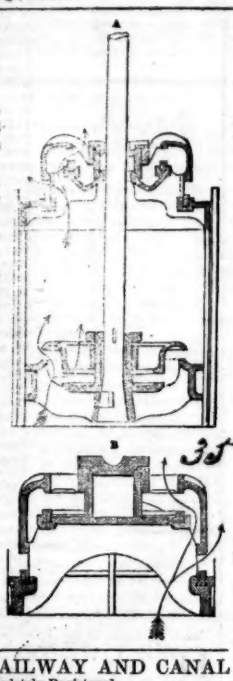
APPLICABLE TO PUMPS OF EVERY DESCRIPTION.

The superiority of these valves, as economical in respect both of trouble and expense, has been proved by the experience of their GENERAL USE for more than SEVEN YEARS

The patentees refer to nearly all the water-works, engineers in the kingdom, by whom satisfactory testimonials have been freely given.

The principle adopted is that of "OBTAINING THE GREATEST WATER PASSAGE BY THE LEAST POSSIBLE PRESSURE AREA," thereby avoiding the great concussion occasioned by the closing of ordinary valves, and the loss caused by letting in air under them.

Until the invention of these valves (first used at the East London Water-Works), the most economical mode of raising water—viz., by the plunger-pump, and the principle of expansive steam, as practised in Cornwall, was impracticable for water-works purposes.



Sketch A shows the manner in which the valves have been applied to air-pumps of steam-engines.

Sketch B, the manner of their application to pumps for lifting water. 35

The Valves are shown open in both Sketches.

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Oxide of iron	32	Zinc	3
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NEERING AND PUBLIC ENTERPRISE, price 2s. 6d. No. IX., for AUGUST, will contain—Railways in India, with a Map—Railways in Holland, with a Map—Railways in the Island of Sardinia, with a Map—Railways in Canada, with a Map—The projected Railway from London to Manchester, with a Map—Oxford, Witney, and Cheltenham, with a Map—Northampton, Banbury, and Cheltenham, with a Map—Articles on Railway Legislation, and its results—The French Northern Line—Commission of the Guages—Employment of the Army on Public Works—Extinction of the Railway Department of the Board of Trade—Committee of the South-Eastern Railway—Meetings of Companies—Law Proceedings—New Projects of the Month—the Markets—besides a variety of Miscellaneous Intelligence connected with the establishment and projection of Railways at Home and Abroad.

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STEAM TUBES, of the BEST QUALITY, from 12 to 14 inches long, of the usual bore and substance, at 7s. per dozen.—Apply to JOSEPH PRICE,

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GIVING ALSO THE SITUATION OF THE MINERALS.

Size of the Map 5ft. 6in. by 4ft. 6in.—Price in sheets £1 10s.; coloured and mounted £2 2s.

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Orders received by Messrs. Grant and Griffith (late Harris), St. Paul's Churchyard; Mr. Baillière, 219, Regent-street; J. A. Knipe, at the office of publication, 9, Wine Office-court, Fleet-street; and at the office of the *Mining Journal and Railway Gazette*, 26, Fleet-street, London—where all communications for the proprietor may be addressed. 46

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—ALTERATION IN TIME OF RUNNING THE TRAINS.—In future the trains will CEASE to RUN in the MORNING, but CONTINUE to RUN DAILY, from One till Seven o'clock P.M. This line of railway, of two miles in length, has been laid down at great expense, to TEST the ADVANTAGES of PROSSER'S PATENT GUIDE WHEELS. It contains gradients of 1 in 50—1 in 75—and 1 in 200; and curves of the radii of ten chains.—Engineers and persons interested in railways are invited to inspect it.

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RAILWAY, FROM ARMAGH TO OMAGH.

Capital £400,000, in 16,000 shares of £25 each.—Deposit £1 7s. 6d. per share.

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Notice is hereby given, that NO FURTHER APPLICATIONS for SHARES in this company will be received after TUESDAY, the 5th of AUGUST instant, immediately after which the allotment will be proceeded with.

By order, F. W. M'BLAIN, Secretary.

London Offices, 5, Gresham-street, Bank, August 1, 1845. 49

TEAN AND DOVE VALLEY, AND EASTERN AND

WESTERN JUNCTION RAILWAY.—(Provisionally Registered.)

The provisional committee beg to announce that, under the advice of their engineers, they have determined to increase their capital from £1,800,000, as originally proposed, to £2,000,000, and to carry their main line to a point on the proposed Trent Valley Railway, near to Nuneaton, instead of Atherstone, as before advertised. Applicants for shares who do not concur in the alterations, will be at liberty to withdraw their applications.

The provisional committee also beg to announce, that, notwithstanding the increase of their capital, NO FURTHER APPLICATIONS for SHARES can possibly be received.

The allotment will be proceeded with as soon as a proper examination of the applications has been effected. By order, JOSEPH RICHARDSON, Sec. pro tem. 50

Office of the Company, High-street, Burton-on-Trent, July 31, 1845.

REMINGTON'S LINE.

LONDON AND MANCHESTER DIRECT INDEPENDENT

RAILWAY, with a Branch through the Staffordshire Potteries to Crewe.

Provisionally Registered.—Offices of the Company, 29, Moorgate-street, London; High-street, Bedford; and St. Ann's-square, Manchester.

Capital, £5,000,000, in 100,000 Shares of £50 each.—Deposit, £2 15s. per Share.

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D. T. Johnson, Esq., Aldermary Church-yard, London.
Richard Johnson, jun., Esq., Moorgate, London.
John Joseph Keene, Esq., St. John's-wood, London, director of the National Provincial Bank of Ireland
William King, Esq., Director of the Freemasons' Life Assurance Company.
George P. Livius, Esq., the Grove House, St. Cuthbert's and Caldwell Priory, Bedford
Horace W. Meteyard, Esq., B.C.L., Middle Temple and Chatham-place
Captain Douglas Kinnaird Pulteney, Parliament-street
James Reade, Esq., Lower Berkeley-street, London.
Major James Waller, K.H., St. James's-square.
Henry Wardle, Esq., Macclesfield. 51

ENGINEERS.—Sir John Rennie, F.R.S.; George Remington, Esq., C.E.

BANKERS.—London: Messrs. Barnard, Dimsdale, and Co., Cornhill; Manchester, Manchester and Liverpool District Bank, and National Provincial Bank of England; Liverpool, Macclesfield, and Hanley—Manchester and Liverpool District Bank; Bedford, Thomas Barnard, Esq., Messrs. Trapp and Co.

SOLICITORS.—Messrs. Sir George Stephen and Hutchinson, 29, Moorgate-street; John Owens, Esq., 35, Moorgate-street, London; William Rogers, Esq., Bedford; R. H. Wilson, Esq., Moseley-street, R. B. B. Cobbett, Esq., Marsden-street, Manchester.

SECRETARY.—Henry Williames Matthews, Esq.

LOCAL AGENTS.—Leicester, Messrs. Brown and Palmer, solicitors; Uttoxeter, William Arnold, Esq.; Ashby-de-la-Zouch, Edward Mortimer Green, Esq.; Macclesfield, Messrs. Parrott, Colville, and May, Town Clerks; and Derby, Henry Mozley, jun., Esq., solicitor and coroner.

The committee of management have the pleasure to announce, as one instance among many of the great public advantages likely to result from the carrying out of this railway, that certain leading coalmasters of Staffordshire have proposed to this company that, in the event of the line being established, they will guarantee a clear annual profit of £50,000 for the conveyance of coal to the London market alone; and they assert, though it forms no part of their present proposal, that another £50,000 per annum may be realised from other markets. In the event of such compact being accepted, they propose to deliver their best coals in the London market at 12s. 6d. per ton, which would insure to the metropolis a supply of coal at a price most materially below the present cost.

The committee feel it right to make this announcement, because it is one of the early practical illustrations in proof of the great public utility which the committee most confidently anticipate from the establishment of this important national project.

By order, HENRY W. MATTHEWS, Secretary.

GREAT RAILWAY MEETING AT ASHBY-DE-LA-

ZOUCH.—On Thursday, the 31st ult., a MEETING of the INHABITANTS of ASHBY-DE-LA-ZOUCH and neighbourhood was held at the Queen's Head Hotel, for the purpose of meeting a DEPUTATION from the provisional committee of management of the LONDON AND MANCHESTER DIRECT INDEPENDENT RAILWAY (Remington's Line), which consisted of the following gentlemen:—

Major John T. Croft, Regent-street, London
Geo. Peter Livius, Esq., the Grove House, St. Cuthbert's, and Caldwell Priory, Bedford
H. King, Esq., London, director of the Freemasons Assurance Company
Richard Johnson, Esq., London
Horace Meteyard, Esq., barrister-at-law
Sir George Stephen, London
John Burgess, Esq., boroughreeve of Manchester
R. H. Wilson, Esq., Manchester
R. B. B. Cobbett, Esq., Manchester

The large room of the inn was crowded to suffocation by most of the gentlemen of property and influence in the town and neighbourhood.

ROBERT JACOMB HOOD, Esq., of Bardon Park, in the chair. 52

The following resolutions were passed unanimously:—

Moved by John Eames, Esq., of Ashby-de-la-Zouch; seconded by Mr. J. Davys, of Ashby;

That this meeting welcomes with the greatest cordiality the deputation that has this day attended at Ashby, from the London committee of Remington's London and Manchester Direct Railway, and assures the company at large that the want of a direct communication between this neighbourhood and the metropolis, and other important districts, has long been felt, and that the supply of such communication is a subject of the greatest anxiety and importance.

Moved by Mr. Bindley, of Ashby; seconded by Mr. Lovell, of Ashby;

That the line propounded this day by the deputation will meet the necessities of this town and neighbourhood better than any other line which is now in agitation, and is also so fairly proposed by its originators, and so well supported by the country at large, that it calls for the especial approbation of this meeting.

Moved by the Rev. M. Vavasour, Vicar of Ashby; seconded by Mr. Charles Brunt, of Swadlincote;

That the manly and straightforward assurance of carrying out the line, given by the deputation to this meeting, deserves its utmost confidence, and that Remington's Direct line shall receive all the support which can be afforded by the influence or exertions of the gentlemen now present.

Moved by the Rev. F. Merewether, Rector of Coleorton; seconded by Mr. Cape, of Ashby;

That the best thanks of this meeting be given to the deputation that has this day attended Ashby, for their visit, and to the company at large of this railway, for undertaking the project now in hand.

Moved by Robert Green, Esq., of Odstone-hill; seconded by William Grimson, Esq., of Newbold Verdon;

That the thanks of this meeting be given to the chairman for his able and obliging conduct in the chair.

By order, H. W. MATTHEW, Sec.

ONE GUINEA WELLINGTON BOOTS, MADE TO

MEASURE, by G. GARRETT, BOOTMAKER, by special appointment, to the KING OF THE BELGIANS.—A STOCK of the most FASHIONABLE and HIGHLY-FINISHED BOOTS, of *all kinds*, kept ready made, to suit the convenience of Noblemen, Officers of the United Services, and Gentlemen, who prefer trying on boots previous to purchasing, or giving an order.—G. GARRETT, ARMY BOOTMAKER, 130, JERMYN-STREET, and 4, LEICESTER-SQUARE. 53

DIRECT LONDON AND MANCHESTER RAILWAY.

OFFICES, 48, MOORGATE-STREET, LONDON.

(PROVISIONALLY REGISTERED.)

Capital £5,000,000, in 100,000 shares, of £50 each.—Deposit £2 15s. per share.

PROVISIONAL COMMITTEE.

The Earl of Mexborough, Methley-park, Yorkshire
The Lord Rossmore, The Dell, Windsor
Colonel the Right Hon. George Lionel Dawson Damer, M.P. 6, Tilney-street, Park-lane
Lieutenant-Colonel the Hon. John Craven Westenra, M.P. Sharavogue Castle, Roscrea, Ireland
The Hon. Robert Gore, M.P. 21, Wilton crescent
David Robert Ross, Esq. M.P., Rosstrevor, Ireland
John Humphery, Esq. M.P. and Alderman, Hayes' Wharf, Tooley-street
John Dillon, Esq. Fore-street, Cripplegate
Andrew Caldecott, Esq. 20, Cheapside
John Kinnersley Hooper, Esq. Alderman, Queenhithe
Thomas Kelly, Esq. Alderman, 17, Paternoster-row
Thomas Sidney, Esq. Alderman and Sheriff, Leyton House, Essex
Benjamin Oliveira, Esq. F.R.S., 8, Upper Hyde-park-street
Rigby Wason, Esq. Corwar House, near Girvan, Ayrshire
Richard Woodhouse, Esq. 56, Torrington-square
Kenyon Stevens Parker, Esq. Q.C., 40, Gower-street
Thomas Shepperson, Esq. 27, Cheapside
William White, Esq. 109, Cheapside
Thomas Townend, Esq. Manchester
James Kershaw, Esq. Alderman, Manchester
Robert Barbour, Esq. Manchester
Charles Warwick, Esq. 137, Cheapside
Richard Hopper, Esq (Acting Chairman of the Dublin, Belfast, and Colerraine Railway), Upper Clapton
William Lawrence, Esq. Brixton
John Burd, Esq. and Alderman, Manchester
Thomas Longworth, Esq. Manchester
Thomas Price, Esq. Manchester
J. W. Deacon, Esq. Gresham-street and Manchester
Jonas Smith Wells, Esq. 75, Old Broad-street
John Bradbury, Esq. 6, Aldermanbury
Thomas Devas, Esq. 24, Lawrence-lane
William Cook, Esq. St. Paul's Churchyard
John Gladstone, Esq. Stockwell Lodge, Surrey
Charles Townend, Esq. Manchester
J. P. Gassiot, Esq. F.R.S., 77, Mark lane
J. Reeves, Esq. 150, Cheapside, and Leyton, Essex
Richard Groucock, Esq. 5, Bow Churchyard
T. B. Simpson, Esq. Rutland Lodge, Brixton, Director of the Richmond and North Wales Railways
Thomas Vyse, Esq. 3, Cripplegate-buildings
William Rathbone, Esq. Temple
Thomas Winkworth, Esq. 44, Gutter-lane
James Procter, Esq. Manchester
Sir John Key, Alderman, London
Henry Plumtre Gipps, Esq. 9, Montagu-place, Bryanston-square
William Cash, Esq. 39, Wood-street, Cheapside
Richard Vyse, Esq. Luton, Bedfordshire

(With power to add to their number.)

COMMITTEE OF MANAGEMENT.

Chairman pro tem.—JOHN DILLON, Esq.
Deputy-Chairman pro tem.—ANDREW CALDECOTT, Esq.

Mr. Alderman Hooper	Richard Hopper, Esq.
Thomas Shepperson, Esq.	William Cash, Esq.
William White, Esq.	J. W. Deacon, Esq.
William Lawrence, Esq.	John Gladstone, Esq.

Mr. Alderman Sidney.

Engineer—John Urpeth Rastrick, Esq.

JOINT SOLICITORS.

Messrs. Ashurst and Son, 137, Cheapside
Messrs. Sudlow, Sons, and Torr, 20, Chancery-lane

BANKERS.

London—Messrs. Jones Loyd and Co. Lothbury
Manchester—Messrs. Jones Loyd and Co.

LOCAL AGENTS.

Messrs. Stone and Paget, Leicester
Messrs. Boyle, Low, Pim, and Co. Dublin

Secretary pro tem.—Edward L. Ogle, Esq.

Parliamentary Agents—Messrs. Parkes and Preston, 21, Gt. George-st., Westminster

Many of the principal merchants and traders in London and Manchester, engaged in the trade of those towns, being of opinion—

That it is of paramount importance to the trade and to the public, that they should not continue dependent for communication between London and Lancashire upon one, and that circuitous, line of railway, already inadequate to the purposes of the existing traffic;

That the immediate formation of a direct line is essential, because, if delayed, it will become more and more difficult, in consequence of the branch railways which local necessity will originate;

That an independent trunk line is necessary to guard the trade and commerce of the metropolis and Lancashire against excessive charges, and the many evils of a rapidly extending monopoly—they have, therefore, established this company to form such a line.

The objects of the company are—to form the shortest practicable line—to traverse it in the shortest possible time, consistently with safety, by the best motive power, at the cheapest fares, and at the least possible charge for goods.

Experience has shown, as to railways, that the interests of the public and the interests of the proprietors are identical.

That the lowest fares and charges, and the quickest journeys, are advantageous to both.—That system which has quintupled the number of letters by the post, the result of celerity and cheapness, must prove equally efficacious in the transit of persons and goods.

The promoters of the present undertaking are, for the most part, largely interested in the trade between London and Manchester.

They deem another line essential to the increasing wants of the great manufacturing and commercial interests throughout the whole distance.

Their own operations will contribute greatly to the traffic of the intended line, and they are, therefore, deeply interested in its establishment.

They are convinced that the time has arrived when direct lines to principal towns have become absolutely necessary, and will yield the greatest benefit to those interested in them, and to the country at large.

This line will afford accommodation to many considerable towns as yet untouched by any existing line.

It is intended to commence in London as near the centre of business as possible.

In its course the line will approach to and accommodate the following towns—viz., Barnet, St. Alban's, Dunstable, Luton, Ampthill, Bedford, Wellingborough, Kettering, Market Harborough, Leicester, Loughborough, Ashby-de-la-Zouch, Burton-on-Trent, Uttoxeter, Cheadle, Leek, Macclesfield, Stockport, and Manchester, terminating in the station of the Manchester and Birmingham Railway.

The present nearest approach to Manchester is by the London and Birmingham and the Manchester and Birmingham Railways—a distance of 197½ miles. By the proposed line the distance will be considerably shortened, and will form the nearest route to Carlisle and all places north of Manchester. There will be no change of trains or removal of luggage from one train to another—no delay in waiting for trains from other parts of the country, but the same train will proceed without loss of time throughout the whole distance.

The atmospheric principle will be publicly tested before the next session of Parliament, and the committee will be prepared to adopt it, if, in practice, it shall vindicate its claims to superiority.

Applications for shares may be made, addressed to the provisional committee, or to the solicitors, at the company's offices, 48, Moorgate street, London, of whom further particulars may be obtained.—July, 1845.

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Direct London and Manchester Railway, 48, Moorgate street, London.

Gentlemen,—I request that you will allot to me shares, of £50 each, in this company, and I undertake to accept the same, and to pay the deposit thereon, or upon any less number that may be allotted to me, and I undertake also to execute the Parliamentary contract and subscribers' agreement when required.

Name in full.....
Residence.....
Trade or profession.....
Reference.....
Address of referee.....

Date..... .....

This company is established pursuant to the following request and authority:—

"We, the undersigned, being interested in the trade of Manchester, and in the shortest and quickest intercourse between London and Manchester, hereby express our conviction that a direct line of railway between those places will give the public the greatest cheapness, convenience, and speed.

"That it is of paramount importance to the trade and to the public, that they should not continue dependent for communication with Lancashire upon one, and that a circuitous, line of railway.

"That the immediate formation of a direct line is essential, because, if delayed, it will become more and more difficult, in consequence of the branch railways which local necessity will originate.

"That an independent trunk line is necessary to guard the trade and commerce of the metropolis and Lancashire against excessive charges and the many evils of a rapidly extending monopoly.

"We, therefore, authorise and request Messrs. Ashurst and Son, solicitors, and Messrs. Sudlow, Sons, and Torr, solicitors, to take the necessary steps for the formation of a committee, with a view to the adoption of such a line.

Allan and Smith, London
William Allen and Brothers, Manchester
H. Bannerman and Sons, Manchester
Robert Bentley and Co. London
John Burd and Sons, Manchester
Robert Barbour and Co. Manchester
George Brettle and Co. London
J. T. Bassett, London
Burles and Gladstones, London
John Burls, London
James Bradbury, Manchester
Bradbury, Greatorex, and Co. London
Bowman and May, London
Blair and Burton, Manchester
S. A. Butterworth and Co. Manchester
Caldecott, Powell, and Willcocks, London
Cook, Sons, and Co. London
J. and F. Cowper and Co. London
Courtauld, Taylor, and Co. London
Capper, Morley, and Co. London
Francis W. Coates, London
William Cash, London
Cheeper, Watson, and Jackson, London
James Carlton, Walker, and Lewis, Manchester
Richard Cobden and Co. Manchester
Thomas Crompton, Manchester
Darby and Garland, London
James Deacon and Sons, London and Manchester
W. and T. Devas, Minchener, and Routledge, London
Davies, Freeman, and Co. Manchester
John Dugdale and Brothers, Manchester
Ellis, Everington, and Co. London
David Evans and Co. London
Samuel Fletcher, Son, and Co. Manchester
George Fraser, Son, and Co. Manchester
George Faulkner and Co. Manchester
A. Grant and Brother, London
John and Edward Grundy, Manchester
Edward Granville and Co. London
Gillet, Porter, and Co. London
Gates, Coates, Bartlett, and Co. London
Lot Gardiner and Brothers, Manchester
Hood, Ward, and Hood, London
Henry Hilton, Manchester
Hobday and Cheetham, Manchester
Hoyle and Hanson, London
Jameson and Banks, London
Johnson, Bulmer, and Co. London
Kershaw, Leese, and Co. Manchester
Leaf, Coles, Smith, and Co. London
Luck, Castle, and Co. London
Lycett and Davies, London
Luck, Bouch, and Coath, London
John Lart and Son, London
Le Gros, Thompson, and Bird, London
Thomas Lomas and Co. Manchester
Lewis and James, London
Liddiard and Co. London
Lewellin, Truman, and Hitchcock, London
William Lawrence, London
Morrison, Dillon, and Co. London
J. and R. Morley, London
M'Clure and Haslam, Manchester
James Martin, London
Robert Mutrie, London
John Munn and Co. Manchester
James and William Morley, London
Nicholls, Lucas, and Co. Manchester
Ovington, Warwick, and Co. London
Oldroyd, Hodgson, and Co. London
J. F. Pawson and Co. London
Potters and Norris, Manchester
Peel, Holmes, and Co. Manchester
John and Nathaniel Phillips and Co. Manchester
Puzey and Pallet, London
Reddish and Bickham, Manchester
R. H. Robertson and Co. London
Rhoades and Williams, London
John Read, London
Samuel Ridley, Son, and Ellington, London
Rowlandson and Atkinson, London
Sadler, Fenton, and Co. London
B. Salomons and Co. London
Sturt and Sharp, London
George and James Smith, Manchester
Thomas James Smith, London
W. S. and T. Storar and Co. London
Thomas Shepperson, London
Strachan and Roan, London
Sherwood, Gilbert, and Piper, London
Townend and Hickson, Manchester
Thomson, Brothers, and Sons, Manchester
Joseph Travers and Sons, London
Todd, Coston, and Co. Manchester
Tattersall and Mellor, Manchester
Tarsey and Millgate, London
George Virtue, London
White and Greenwell, London
Ward and Co. London
Winckworth and Procters, Manchester
Thomas Worthington, Manchester
John Wreford and Co. London
Westron, Dignam, and Co. London
S. B. Watts and Co. Manchester
Wilson, Keith, and Co. London
Wreford and Pugh, London
Welch and Margetson, London."

DIRECT WESTERN RAILWAY, FROM LONDON TO FALMOUTH AND PENZANCE.

Capital £3,000,000, in 120,000 shares, of £25 each.—Deposit £1 7s. 6d. per share.

The line will commence at or near Newbury, in the county of Berks, and proceed from thence in a direct course to Taunton; thence by Tiverton to or near Crediton, Okehampton, and Hatherleigh, Launceston, Truro, to the port of Falmouth, with a continuation of the line from Truro, by Redruth, to Penzance. The towns of Devizes, Lavington, Ludgershall, Mariborough, Warminster, Westbury, Bradford, Trowbridge, Frome, Bruton, Wells, Glastonbury, Shepton Mallett, Castle Cary, Somerton, and Langport, and the populous villages in their vicinity, now destitute of the benefits of railway communication, will have these advantages conferred upon them, and be placed in immediate connection with the metropolis.

The rich agricultural and mineral districts of Devon and Cornwall will have similar advantages, and London will be connected with the city of Exeter, and the ports of Plymouth, Falmouth (the natural packet station of the empire), and Penzance, by the shortest and most direct route. The proposed line will also unite the western districts of the kingdom with Wales and the north and north-eastern districts of the country, and be to the Great Western Railway that which the Trent Valley is to the London and Birmingham and the Grand Junction Railways.

The wide guage, the national one of the western counties and of Wales, will be adopted, and such portions of the Great Western line as unites Newbury with the metropolis, and Taunton with Tiverton and Exeter, will be connected by junctions with the proposed line.

A distance exceeding thirty miles will be saved by the contemplated line between London and Exeter, and fifty between the metropolis and Falmouth.

The prospectus, with the list of the provisional committee of directors, will be issued early in the ensuing week; in the interim, communications are to be addressed to the secretary, at the office of the company, No. 4, Coleman-street, London.

IMPORTANT NOTICE.

GREAT NORTH AND SOUTH OF FRANCE RAILWAY

COMPANY.—The above company, so far as regards the tender for the GREAT NORTH LINE, is UNITED with the company of DECAN and LEBEUF, under the following directions:—

ENGLISH DIRECTORS.

FRANCIS MOWATT, Esq. Chairman.

Colonel Barlow	Sir William Magnay, Bart.
Admi. Sir E. Codrington, G.C.B. &c.	M. Adolphe de Milly
John Crosthwaite, Esq.	The Right Hon. Lord Rossmore
William G. Haytor, Esq. M.P.	William Rotherham, Esq.
The Hon. G. F. Hotham	The Hon. C. P. Villiers, M.P.
William Hughes Hughes, Esq.	T. M. Wegnelin, Esq.

FRENCH DIRECTORS.

M. Decan, Maire du 3me arrondissement de Paris, President
M. Louis Lebeuf, Regent de la Banque, ancien Depute
M. Le Comte D'Adhemar de Lebaume des Rosseaux de Medrano, Administrateur des Glaces de St. Quirin et Circy, Membre du Conseil General des Ardenñes
M. R. de Barbarin, conseillor a la cour des Comptes
M. Le Marquis d'Alon, ancien Prefet
M. Beaude, Membre du Conseil de Salubrite de la Seine
M. Catherinet de Rancey, ancien Administrateur des Messageries Royales
M. Bonjour fils aine de la maison Bonjour fils aine et Verrier Commissionaire de Roulage
M. Andre Koecklin, Depute du Haut Rhin, ancien maire de Mulhouse, et President de la Chambre de Commerce de la meme ville
M. Le Duc de Trevise, Pair de France, Chevalier d'Honneur de S. A. R., Madame la Duchesse d'Orleans, Membre du Conseil General de la Seine
M. Le Comte de Jouffrey Gonsans, Membre du Conseil General de l'Indre, et du Conseil General de l'Agriculture
M. Vee, Maire du 5me arrondissement de Paris
M. Le Vicomte de l'Espine, Administrateur de la Compagnie le Providence

In consequence of numerous applications they have received on the subject, the directors hereby give Notice, that they cannot possibly extend beyond Monday next, the 4th of August, the time for payment of the deposit money on the shares they have allotted, it being required by the French authorities, that all the necessary documents shall be lodged in Paris by the 10th August.

Dated this 31st day of July. By order of the Board of Directors,
[redacted]ERICK JOHN ROTHERY, Sec.

Temporary Offices, 7, Warnford-court, Th[redacted]morton-street.

GREAT NORTHERN RAILWAY OF FRANCE, FROM PARIS TO THE BELGIAN FRONTIER.

PROVISIONAL COMMITTEE.

MM. Ch. Lafitte, Banquier, Membre de la Chambre des Deputes
E. Humann, Ancien Inspecteur des Finances
E. Simons, Administrateur des Messageries Royales et Administrateur de la Compagnie du Chemin de Fer de Rouen
Tarbé des Sablons, President de la Compagnie du Chemin de Fer de Versailles, Rive Gauche
W. J. Chaplin, Esq. Chairman of the South Western Railway
Abel Lewis Gower, Esq. London
Robertson Gladstone, Esq. Liverpool
John Moss, Esq. Chairman of the Grand Junction Railway
John Masterman, jun, Esq. London
Matthew Uzielli, Esq. London

The English subscription towards this undertaking, formed under the prospectus, dated 26th December, 1844, having been dissolved, and a new subscription being in course of formation, under the above management, for the same purpose and on similar terms, parties interested in the dissolved subscription, and desiring to join the new one, who may not have received the circular letters and forms from this office, should lose no time in communicating on the subject with the undersigned, inasmuch as the new subscription must be completed and the list of subscribers made up and lodged with the French Minister of Public Works on or before the 10th proximo. The deposits of such subscribers as may not desire to join the new subscription are immediately payable to their order. All necessary forms are in readiness at this office.—(Office hours from Eleven to Three o'clock).

By order of the provisional committee,
62, King William-street, City, July 26, 1845. ED. AIME, Secretary.

CLARENCE RAILWAY.—Capital £500,000.—The Clarence

Railway Company, under the powers of their last Act, passed 27th June, 1843, propose to raise the sum of £70,000, to pay off the balance due to the Exchequer Loan Commissioners, by an ISSUE of 7000 SHARES, of £10 each, to be designated (pursuant to the Act) "Government Loan Shares," such shares to bear an interest at the rate of 4 per cent. in perpetuity, and to be a first charge on the railway and works. Of the above £70,000, upwards of one-half is already subscribed for. 58

Applications for the remainder (in sums of not less than £100) may be made to the secretary, at the company's offices, No. 90, Old Broad street, London, where any further information respecting the revenue of the company, &c., may be obtained.—July 11, 1845.

CLARENCE RAILWAY.—Notice is hereby given, that the

HALF-YEAR'S DIVIDEND, due 1st July, 1845, on the second-class preferential shares, at the rate of 5 per cent., is now in course of PAYMENT, at the company's office, 90, Old Broad-street, London. CHARLES BENSON, Sec.
July 25, 1845. 59

GLOUCESTER, ABERYSTWITH, AND CENTRAL

WALES RAILWAY.—Notice is hereby given, that the OFFICES of the company are REMOVED to No. 1, NEW BROAD STREET, where all communications must in future be addressed. By order,
July 30, 1845. T. HAWKER, Secretary. 60

GREAT WESTERN RAILWAY OF BENGAL

PROVISIONALLY REGISTERED.

Capital £4,000,000, in 80,000 shares, of £50 each.—Deposit 5s. per share.
OFFICES OF THE COMPANY, 147, LEADENHALL-STREET. 61

Notice is hereby given, that NO APPLICATIONS for SHARES in this company will be received after SATURDAY, the 9th day of August next.

GREAT CENTRAL SARDINIAN RAILWAY COMPANY.

80, King William-street, London-bridge.

The Duke di Lante di Monterfeltro, president, having summoned a full board for this morning, stated that, in consequence of an official interview he had yesterday with the Count de Revel (who, in the absence from London of his Excellency Count Pollon, Minister Plenipotentiary of Sardinia, is acting as Charge d' Affairs), he was happy to be enabled to inform the directors that the Sardinian Government has seen with satisfaction the forming of this company for the laying down of a railway through the island of Sardinia; and, that so soon as the deputation shall be prepared to start for Turin, for the purpose of receiving the final and exclusive concession of this line—the only one in the Sardinian states which will be granted by that Government to a foreign country—the embassy of his Sardinian Majesty in London will with pleasure provide the deputation with letters for the authorities at Turin. The noble duke further communicated to the provisional committee that Count de Revel had heard that his Excellency the Marquis di Villamarina, viceroy of Sardinia, had arrived at Turin from Cagliari, and from what the Duke di Lante could understand, personally to express to the superior Government at Turin the anxiety manifested by the inhabitants of the island for the speedy construction of this important railway. By order,
July 30, 1845. G. LANDELS, Secretary. 62

GREAT CENTRAL SARDINIAN RAILWAY.—

Extract of a letter received from W. S. Craig, Esq., dated Cagliari, July 7, 1845, to R. Buck and Co., of Eastcheap.

"The projected railway is the exclusive topic of conversation here, the Sardinians would rejoice at seeing it carried into effect. I called on the viceroy with the prospectus and map, and he requested me to favour him with a translated copy of the first, which I did. He seems quite delighted with the idea, and I feel certain his influence will be exerted in favouring the project. He leaves by this packet on a visit to Turin, and will be absent three months. Since I first called upon him, he has twice sent for me to visit him at the palace, and consult on the subject of the railway." 63

GREAT CENTRAL SARDINIAN RAILWAY.—

It having been represented to the provisional committee that there has not been sufficient time to make known to the subscribers the important announcement communicated to the board by its president on Wednesday last, and published in the daily journals of the 31st ult. and 1st inst. it has resolved to EXTEND the PERIOD for PAYMENT of deposits into their bankers till TUESDAY NEXT, the 5th inst., inclusive, to which effect instructions have been sent to the bankers of the company, Messrs. Masterman, Peters, and Co., the Union Bank of London, the Exchange Bank of Manchester, and their respective agents throughout the country.
80, King William-street, August 1st. By order, G. LANDELS, Sec. 64

BORDEAUX, TOULOUSE, AND CETTE RAILWAY.

(EZPELETA'S COMPANY.)

DIRECTORS IN FRANCE.

M. F. X. DE EZPELETA, President.

M. Bruno Deves
M. D'Orient de Bellegarde
M. Ed. Dotesac
M. Camille Lopes Dubec — Bordeaux
M. Damas, jun.
M. A. Journu
M. Paul Vignes
M. Biquet — Toulouse
M. Cibiel
M. F. Glaize
M. Serres — Montpellier
M. Pagezy
M. Achille Durant
M. J. Ricard — Marseilles
M. Theophile Delord
The Duke d'Albufera, Peer of France
The Count de Gramont d'Aster, Peer of France
M. Charles Mallet — Paris
Baron James de Rothschild
M. Ch. Royer
M. Thurneyssen 65

DIRECTORS IN ENGLAND.

DAVID SALOMONS, Esq. Chairman
JOHN BAGSHAW, Esq. Deputy-Chairman

Col. Sir Frederick Hankey, G.C.M.G.	Joseph Esdaile, Esq.
James Henry Attwood, Esq.	Charles Edward Mangles, Esq.
Adam Duff, Esq.	Joseph Mayer Montefiore, Esq.

REPORT OF THE ENGLISH DIRECTORS TO THE SHAREHOLDERS.

The session of the French Chambers having now closed, the English directors of this company embrace the earliest opportunity of making the following report to their subscribers:—

The directors having associated themselves with persons of the highest character and influence in France, proceeded to constitute the company by an Acte de Societe, and to deposit a tender (soumission) for constructing the proposed line of railway from Bordeaux to Toulouse and Cette. The conditions of this tender were a lease of the line for seventy-five years, and that the French Government should contribute the land—all other expenses being borne by the company. These conditions received the assent of the Minister of Public Works; and the value of the line being estimated at 15,000,000fr. (£600,000), it was proposed, in the Projet de Loi presented to the Chamber, that this sum should be contributed by the Government towards the construction of the railway. This Projet de Loi was referred by the Chamber to a "commission," who reported in favour of the same—adding to the Government subsidy the further sum of £3,600,000fr. (£120,000) towards defraying the expenses of a branch from Castelnaudary to Castres, which it was deemed expedient to attach to the main line. Thus the entire sum to be contributed by the French Government, in aid of the capital of the company, amounts to 18,000,000f. (£720,000).

This report of the "commission" was made to the Chamber at too late a period to allow of the law being passed during the session just terminated. It, therefore, remains at this stage, before the Chamber of Deputies, to be resumed and completed in the next session of the French Legislature, which will commence towards the latter end of the present year.

The affairs of the company being thus far advanced, the directors have no hesitation in expressing their determination to continue unabated their exertions to bring their labours to a favourable conclusion; but, before taking any further active measures, it is desirable that they should know that their views meet with the cordial concurrence of the subscribers, for whose guidance they feel it their duty to make the following remarks:—

The claim of priority of application is one that has always been respected by the French Government; in addition to which, the advantage of the company's maintaining its present high position before the Chambers, and showing its readiness at all times to accept a grant of the line on the terms proposed, is so manifest, that the directors cannot doubt that every one of their subscribers will agree with them as to the inexpediency of adopting any measure tending to weaken that position.

The directors beg further to observe, that a strong feeling is beginning to develope itself throughout France, as to the impolicy of submitting important public undertakings—such as the great lines of railway—to the chance and risk of reckless competition, and that the original system of accepting, on the responsibility of the Government, the private tender of parties of wealth and character, is that which affords the greatest permanent advantage and security.

Under these circumstances, the directors propose to avail themselves of the earliest favourable opportunity to urge on the Minister of Public Works the claims of this company to the preference of a direct concession of the line; and if they should succeed in coming to a provisional understanding (subject, of course, to the approval of the Chambers), it would be the most gratifying part of the duty devolving upon them.

One of the conditions of the prospectus issued on the formation of the company is, that, "if, during the present year, a lease of the line shall not be granted to this company, by virtue of a law passed by the French Chambers, or some definite arrangement shall not be entered into with the French Government, then the whole of the deposits will be paid back, but without interest." Under this clause the directors do undoubtedly feel themselves authorised to open direct negotiations with the Government, in the hope that such negotiations might be brought to a favourable conclusion, or that the company's interests might be otherwise advanced, before the expiration of the present year. But, in order to guard against any possibility of future inconvenience, they have deemed it advisable, at once, to ascertain what proportion (if any) of their subscribers are desirous of forthwith terminating their connection with the company; and in order to afford such of them as are so disposed the opportunity of retiring from the undertaking, the directors call on them to signify their intention to do so on or before 15th August next, otherwise they will be considered as assenting to such measures as the directors, in conjunction with their colleagues in France, may deem best calculated to advance the interests of the company until the concession of this important railway is finally obtained.

Bordeaux, Toulouse, and Cette DAVID SALOMONS, Chairman.
Railway Office, 31, Lombard-street, London, July 30, 1845.

BORDEAUX, TOULOUSE, AND CETTE RAILWAY

(EZPELETA'S COMPANY.)—The shareholders of this company are informed, that they may obtain COPIES of the REPORT of the English Directors, on application at the company's office. By order of the board,
London, July 30, 1845. C. T. BEKE, Secretary. 66

KOLLMAN'S RAILWAY LOCOMOTIVE & CARRIAGE IMPROVEMENT COMPANY.

Increased capital £50,000, in shares of £10 each.—Deposit £2 10s. per share.

DIRECTOR.

The Very Rev. the Dean of HEREFORD, F.R.S., &c., Chairman.

WILLIAM KUPER, Esq., Deputy-Chairman.

John Brown, Esq.	Captain M. H. Sweeny, R.N.
Thomas Davidson, Esq.	Captain F. B. Wardroper, H.C.S.
Samuel H. Powell, Esq.	Walter White, Esq.

STANDING COUNSEL—A. H. Merewether, Esq.

SOLICITOR—George Smith, Esq., 24, Golden square.

BANKERS—Messrs. Cocks, Biddulph, and Co., Charing-cross.

SECRETARY—A. W. Barnes, Esq. F.S.S.

OFFICES—ALBION CHAMBERS, ADAM-STREET, ADELPHI.

The capability of Kollmann's system of railway and its manifest superiority over those in present operation has been fully demonstrated by working models, which are exhibiting at the Adelaide Gallery, but the directors have now resolved, at the recommendation of several eminent engineers, to construct a full-sized locomotive engine and carriage, and lay down as near the metropolis as convenient a short but sufficiently extensive line of railway, with such curves and gradients as have hitherto been deemed insurmountable, that the practical superiority of the system might be fully developed. With this view the directors have obtained the consent of the shareholders to augment the capital of the company by £50,000, in 5000 shares, of £10 each, in order to enable them completely to carry out the objects for which the company was formed.

The superior advantages of the system may be thus briefly enumerated:—Complete security from overturning or running off the rails, facility of traversing curves at any practicable speed, power of ascending gradients hitherto deemed impracticable, diminution of dead weight and friction, and very considerable saving of expense in the construction, and in the wear and tear. In addition to these advantages, the directors have secured patents for a most important application of the system to canals, enabling these, under certain conditions, to compete with railways for the conveyance of passengers and goods, and promising most beneficial results. It will be at once perceived that while the capital required to carry out the company's plans is of small amount, the source of profit is almost unlimited.

Applications for shares, accompanied by a respectable reference, to be made at the company's office, Albion-chambers, Adam street, Adelphi, London, addressed to the secretary, where the terms for granting licenses and every other information can be obtained. 67

AGENTS:

Plymouth—Messrs. Hopwood and Palmer.
Leeds—Messrs. Hirst and Brooke, Albion street.
Manchester—Messrs. Myers and Co., Police-street.
Edinburgh—A. Moffat, Esq., George street.

FORM OF APPLICATION FOR SHARES.

To the Directors of Kollman's Railway Locomotive and Carriage Improvement Company.

Gentlemen,—I request you to allot to me shares in the above company, and I undertake to accept the same, or any smaller number that may be allotted to me, to pay the deposit thereon, and execute the Deed of Settlement, and all other necessary documents, when required. Dated this day of , 1845.

Name .....
House of business (if any) and address .....
Profession or trade .....
Reference .....

CHESTER AND MANCHESTER DIRECT RAILWAY.

PROVISIONALLY REGISTERED.

Capital £800,000, in 16,000 shares of £50 each—Deposit £2 15s. per share.

This line will commence at the city of Chester, and proceed by way of Frodsham within a short distance of Warrington, and thence by the Mersey Valley to Manchester. By the railways connecting Chester with Wrexham, Oswestry, Shrewsbury, Hereford, Gloucester, and South Wales, this will be the nearest route from Manchester to the south-western parts of England, and the minerals of Monmouth and Glamorganshire. The communication with Bristol, Gloucester, and Exeter, will be speedy and direct. On reference to the map it will be seen that a very considerable distance will be saved by this direct line over the present circuitous routes by Crewe or Birkenhead. As a line seeking to support itself from its own internal traffic it will be a first-rate investment. But it is intended that this line should be the precursor of a scheme of no ordinary importance—viz., the rendering Chester an efficient port for large vessels.

On the completion of the provisional committee, and preliminary arrangements on this line, a separate company will be formed for the construction of a ship canal from Dawpool to Chester, a distance of twelve miles; this is a matured plan.

It was entertained by Sir John Rennie in 1825, and subsequently by the late Mr. Chapman, in the same year, who wrote an able report on the subject, with a view of extending it to Manchester, as making that important town a seaport. The ground was afterwards, in 1837, surveyed by Sir John Rennie and Mr. George Remington, with a view to making a ship canal, of twenty feet water, to the walls of Chester; it is sixteen miles nearer to London than Liverpool, and assuming Chester as a central point, and taking a radius of thirty-four miles, it will be seen that it includes Manchester and Warrington, Macclesfield, Congleton, the Potteries, Northwich, Nantwich, Tarporley, the whole of the mineral and manufacturing districts of North Wales in the vicinity of Chester, of the produce of which Chester is the natural out port, but from the force of circumstances, superior enterprise, accommodation, &c., is carried, at extra expense, to Liverpool. From the decay of the Chester port all the trade of the north has concentrated itself into Liverpool, leaving Chester almost abandoned.

By a ship canal of twelve miles, commencing at Heswall, on the northern shore of the Dee, at the head of Dawpool, and continuing to Chester, during eight hours of tide, vessels drawing from fifteen to twenty feet water will be able to get to Chester. The estuary of the Dee to the head of Dawpool is infinitely preferable in point of access and safety to that of the Mersey.

This railway will, therefore, in connection with the ship canal, render to Chester and Manchester incalculable advantages. To the former it will restore the proper position natural to so important a city; to the latter it will give another outlet by sea to the manufacturing districts, free of the heavy port charges and dues to which the produce is now subject. It has not been thought advisable to combine the two objects in one company at present, but, should it be found requisite, the two may hereafter be amalgamated.

This railway will, therefore, have no ordinary merits as an independent undertaking, combining all the advantages of any other lines, with this great addition, that it will be the high road to what is the most convenient outport of Manchester.

There are no difficult earthworks on the line; on the contrary, it will be cheap, and of easy formation.

The provisional committee will be published in a few days. In the meantime, applications for shares, prospectuses, &c., to be made to the solicitors, Messrs. Sir George Stephen and Hutchinson, 29, Moorgate-street; John Owens, Esq., 54, Moorgate-street, London; and Messrs. Higson and Robinson, and R. B. B. Cobbett, Esq., Manchester. 66

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Chester and Manchester Direct Railway.

Gentlemen,—I request you to allot me shares of £50 in the above railway, and I undertake to accept the same or such less number as you may appropriate to me, subject to the regulations of the company, and to sign the necessary deeds, and to pay, when required, the deposit thereon of £2 15s. per share.

Dated the day of , 1845.

Name in full .....
Profession and professional residence in full ..
Residence in full .....
Reference .....

DERBYSHIRE, STAFFORDSHIRE, AND WORCESTERSHIRE JUNCTION RAILWAY.—(Provisionally Registered.)

Capital £600,000, in 12,000 shares of £50 each.—Deposit £2 15s. per share.

The line of railway proposed between Uttoxeter and Dudley has been undertaken at the suggestion of several influential parties, as combining—without being a competing line with any railway at present made—all the advantages of several projected lines, with additions of no ordinary value. The town of Uttoxeter in the Dove Valley is itself the centre of a rich agricultural district, supplying already the markets of Dudley, Tipton, Walsall, Bilston, and Wednesbury, with cheese, cattle, and agricultural produce, but by a very expensive and dilatory mode of transit. All the proposed lines communicating with Manchester, London, and the Potteries, must necessarily pass to or near Uttoxeter. Already the Churnet Valley, Tean and Dove Valley, North Staffordshire, Manchester Direct Independent, Leicester and Ashby lines of railway project a station at Uttoxeter. Assuming either of these former, or some equivalent, to pass, this will be the best route from Manchester, Macclesfield, the Potteries, and the north, to Worcester and South Wales. By the Leicester and Ashby line, which will communicate by its branch to Uttoxeter, traffic of great part of the east of England will be available for Staffordshire and the west. Commencing at Uttoxeter, the line will be carried over favourable ground to Abbot's Bromley, thence down the Blythe Valley to Hamstall-Redware, where it will cross the proposed Leicester and Ashby line, thence to Lichfield; crossing the Trent Valley Railway, it will pass close to Lichfield, through that portion of Cannock Chace, where the Effington Canal passes the Brown Hills, thence by Walsall to Bescot-bridge on the Walsall station of the Grand Junction Railway. From this point it will pass through Wednesbury and the mineral districts of South Staffordshire to Dudley; there it will join all those railways that will connect the Staffordshire coal-field with Worcester, Ludlow, and Portdynllaen on the south-west, Aberystwith, Merthyr Tydvil, Swansea, Hereford, on the west and south. In fact, it will unite by the nearest route the east and west of England.

The population on the line exceeds 300,000, and the ordinary traffic arising from internal sources alone sufficient to maintain the railway, and afford more than ample remuneration to the shareholders.

As a junction line—with the present immensely increasing public favour to railway travelling—it is scarcely possible to compute the amount of passenger traffic, but it must necessarily be very great.

Should it be deemed advisable to extend the line to Ashbourne, the lead, iron, coke, and coal of Derbyshire, the products of the paint manufactures and barytes works at Ashbourne, Cromford, &c., would find a ready transit to Walsall and Birmingham. The increase of passengers attracted by ready means of conveyance to the romantic country of Dovedale and the High Peak, would be, necessarily, very great. By the Uttoxeter Canal would be brought the copper ore, lime, and coal, abounding in the Caldon and the Ribden Mines, and be transmitted by this line to the manufacturing districts of Staffordshire, Warwickshire, and Wales, down to Swansea. A most influential provisional committee, connected with the line, will be published in a few days.

Application for shares and every information to be made to William Arnold, Esq., Uttoxeter, and John Owens, Esq., 54, Moorgate-street, London. 69

FORM OF APPLICATION FOR SHARES.

To the Provisional Committee of the Derbyshire, Staffordshire, and Worcestershire Junction Railway.

Gentlemen,—I request you to allot me shares of £50 each in the above railway, and I undertake to accept the same, or such less number as you may appropriate to me, subject to the regulations of the company; and to sign the necessary deeds, and to pay, when required, the deposit thereon of £2 15s. per share.

Dated this day of 1845.

Name in full .....
Profession and professional residence in full
Residence in full .....
Reference .....

CITY AND WEST END RAILWAY AND TERRACE COMPANY.

Notice is hereby given, that NO APPLICATIONS for SHARES in this company can be received after MONDAY, 4th August. By order,
32, Poultry, London, July 25, 1845. J. HODGSON, Secretary. 70

SLIGO AND SHANNON RAILWAY.

The committee beg to inform the shareholders, that the OFFICES of this company are REMOVED TO WINCHESTER HOUSE, OLD BROAD STREET. By order,
Winchester-house, Old Broad-street, July 23. A. GOLE, Secretary. 71

RUGBY, DERBY, AND MANCHESTER RAILWAY.

Provisionally Registered, pursuant to 7 and 8 Vic., c. 110.

This railway will commence at the Rugby Station of the London and Birmingham Railway, and will proceed in nearly a straight line to Derby, using so much of the Leicester and Swannington Railway as lies in its course; from thence it will join the High Peak and Manchester, Buxton, Matlock, and Midland Railways.

The principle of this railway is to obtain a direct through line between some of the most important districts in the kingdom with the least possible amount of new railway, and, consequently, the smallest expenditure of capital.

The proposed railway will form a direct continuation of the London and Birmingham Railway to Manchester, and thus supersede the necessity of any Direct Manchester and London Railway, as the distance to London by this route will be as short as by either of the proposed direct Manchester and London Railways.

It will also establish the shortest direct communication between Derby and London, Sheffield and London, and between all the towns on the North Midland Railway and London.

The Manchester, Derby, and Rugby Railway will open a direct communication between Manchester and Derby, and will considerably shorten the distance between Manchester and Nottingham and Manchester and Leicester.

The line from Derby to Rugby will establish the direct communication from that town to London, which has been so long considered desirable by the inhabitants.

The same will apply to Sheffield, when the Sheffield and Chesterfield branch of the North Midland Railway is made. 72

The support of the London and Birmingham, the North Midland, and Manchester, Buxton, and Midlands Railways, may be expected for this line.

A report on the line, by one of the most eminent engineers of the day, is in course of preparation, after which a detailed prospectus, with the names of a most powerful directory, together with the amount of capital, &c., will be published. In the mean time communications may be addressed to the company's solicitor, T. G. Brewer, Esq., 13, Gray's Inn-square.

REDUCTION OF FARES ON RAILWAYS.

In the early development of the railway system in this country it was generally feared that the companies would become a giant monopoly; and that, when the coaches were driven off the common roads, the public would be subject to any extravagant charges, which the caprice, or cupidity, of the executive might impose, and for the first few years there were good grounds for those fears; but, as the system extended, and some spirited directors began to try the experiment of cheap fares, it was soon found they not only tended to the accommodation and comfort of the public, but to the profits of the proprietors. Such reduction of fares on the different great lines has already had its beneficial effect on the coffers of the various companies, who have judiciously taken into consideration the facilities the public have been looking forward to for some time—"cheap travelling," and which will insure a greater traffic on the lines, and maintain their stability in these days of railway competition.

The following return of the London and Birmingham Railway is a convincing proof of the benefit of this reduction compared with last year:—Week ending July 19, 1844, trucks 1215, tonnage 2955, and receipts 3609*l.*; for the same period of 1845, trucks 2203, tonnage 5282, and receipts 3355*l.*—showing an increase of 2327 tons in traffic, while the difference in the money returns is only 954*l.* less than formerly—viz., before the reduction in June. For the week ending July 26, 1845, the total receipts for passengers, parcels, mails, carriages, horses, merchandise, and cattle, 22,504*l.* 4s. 10d. A reduction of 10s. in 23s. took place on the tonnage of goods since last year, which, it will be seen, immediately had the effect of nearly doubling the quantity, and no doubt will gradually increase. On the South-Eastern Railway a reduction of 3s. in the first class, 2s. on the second, and 1s. 4d. on the third, has been adopted by the directors. The following are the comparative fares:—

	First class.	Second class.	Third class.
Old fares	18s.	12s.	7s. 4d.
New fares	15s.	10s.	6s. 0d.

Day tickets to be granted one-fourth below the regular charges, and season tickets to be issued; these alterations will come into operation on the 1st of September. The directors of the new railways passed this session cannot be too particular in turning their attention to this point. In France the benefits of cheap travelling is most forcibly shown on the Paris and Rouen Railway, which averages 155,922 fr. per week—whilst last year it was only 131,620 fr. On the Paris and Orleans 153,016 fr.; last year it was only 128,810 fr. On the Paris and Versailles, St. Germain, and other lines, the traffic has increased.

GREAT NORTH AND SOUTH WALES AND WORCESTER RAILWAY.—The promoters of this project, consisting of some of the most influential gentlemen in the principality of Wales, have long considered the best method of connecting the north and south counties with the best point of communication to the metropolis and Birmingham, and have at length decided on the present plan. The proposed line will commence at Carnarvon and terminate at Carmarthen, with a branch to Cardigan, taking in the important towns and ports of Lampeter, Tregaron, Aberystwith, round Cader Idris by Dolgelly, Tremadoc, Llanllyfne, and to Carnarvon; this line will thus afford the most accessible and direct communication with Fishguard, Newport, New Key, Aberavon, Aberdovey, and Barmouth. This railway will form an excellent point for a junction with the Welsh Midland and South Wales Railway, and thus connect the whole of Wales with the metropolis and the midland and manufacturing counties of England, offering in all directions outlets for the mineral and agricultural produce of Wales—her slate, coal, iron, tin plates, butter, fruit, woollen goods, &c., and the completion and occupation of this line will, no doubt, bring into cultivation many thousand acres of land now lying barren, by the cheap introduction of lime where difficult to be procured. The line has been surveyed, and chosen through waste or sheep walk of little value, and where no severe engineering difficulties shall greatly enchance the cost. Through a country like Wales, with its romantic scenery, and mineral and other treasures, there is no doubt railways, when once established, will pay a fair return to the shareholder, and the one under notice, connecting so many populous districts, with four coast harbours, bids fair to be among those whose returns of traffic will continually increase, and thus pay a fair return.

VALE OF NEATH RAILWAY.—The immense mineral riches of South Wales, which are daily growing of more importance as the prospects of improved facility of transport presents itself, loudly call for a thorough and complete system of railroads, to aid in their full development. Already does the projected South Wales Railway occupy a good field for the furtherance of this desirable object, and, on its completion, will vastly assist and increase the traffic of South Wales, but many valuable districts will be found, in which local lines will be imperatively called for; and such is the Vale of Neath Railway, now provisionally registered, which, commencing at Neath, by a junction with the South Wales Railway, and proceeding along the valley by Pont Walby and Merthyr Tidvil, through the midst of the great iron-works in that district, will terminate at the port of Swansea. Such a railway, forming a main trunk through this rich mineral district for numerous branches at various points, will give to the rapidly-increasing population, and extensive collieries, iron and other mineral works, that facility of transit, and cheap and rapid communication which its importance demands. The vast additions to the former mentioned works, as those of copper, tin plate, fire-brick, chemical, &c., will require a far more ready access to the South Wales line than the present mode of communication affords, and which this line will supply. It is estimated that the population through which the Vale of Neath Railway will pass, and which is daily increasing, is at the present time 80,000 persons, and that between the towns of Neath and Swansea there passes annually, exclusive of other minerals, upwards of 200,000 tons of coal, and to which may be added no inconsiderable quantity of agricultural produce and general merchandise, to supply the wants of such a population, consisting of persons in full employment, and generally in a capacity to enjoy the necessaries and comforts of life. The romantic beauties of the Vale of Neath, with its waterfalls and fine scenery, already attracts numerous visitors to the principality, and who, as well as those frequenting the watering-place of Swansea during the bathing season, will greatly increase on the completion of such commodious means of communication. Taking all these favourable circumstances into consideration, there is no doubt as to the result of the completion of this line—viz., great public accommodation; increasing, by the cheapness of transit, many articles of merchandise, and paying a good return to the shareholders for their outlay. The line will be twenty-two miles long, and the capital required is 500,000*l.*

GREAT CENTRAL SARDINIAN RAILWAY.—It will be seen, on reference to our advertising columns, that this railway company is progressing under high auspices, and that the permission for the construction of this central line, which will traverse the whole length of the island, is the only one that will be granted by its Government to a foreign company; the inhabitants also it appears are exceedingly anxious for the speedy commencement and completion of the line—a circumstance which speaks well for their growing civilisation. Sardinia possesses, both in her mineral and agricultural resources, stores of wealth, which this line, as leading to the construction of many others, of which it will form the grand trunk, will go far to properly develope.

AN EXTRAORDINARY CURE OF A DISEASED KNEE, OF TEN YEARS' STANDING, BY HOLLOWAY'S PILLS AND OINTMENT.—Mr. E. Perryns, residing at No. 21, Fargate-street, Worcester, is now cured of an abscess on the knee, and a stiff joint, which had been bad for ten years—indeed, ever since he was fourteen. He lost from the knee-joint several pieces of bone, one being two inches in length. He had been under the most eminent of the faculty in Worcester, and at last was told that his leg must be amputated, as a cure was quite impossible. A perfect cure has been effected in this hopeless case by these wonderful medicines.—Sold by all chemists, and by the proprietor, 244, Strand, London. 73

SUPPLY OF PURE WATER TO THE METROPOLIS AND ITS SUBURBS—PROPOSED NEW COMPANY.—No. XI.

BY ALFRED BURT.

We have submitted the schemes and laid down the principles which impelled the several companies to devise plans to quell the popular clamour for improving the supply of water to the metropolis; and, having investigated the merits of the question, and pointed out the principal defects, and given a confutation to the practicability of the schemes as propounded by the metropolitan water companies, we proceed to the second-class, involving the consideration—viz., the methods proposed for the purification of Thames water, either by subsidence or filtration. The very circumstance of the inhabitants of London and its suburbs receiving their supply of water direct from the River Thames, and the necessity to have that supply free from the impurities with which that stream is contaminated, urged men to conceive systems and to adopt them without resorting to observation and practical experience, whether the medium they had put into operation would effect the result of giving an ample supply of pure and wholesome water, in place of the filthy fluid they propose to clarify; thus emanated those systems of artificial filtrations through beds of sand and gravel, in combination with charcoal, and subsidence in reservoirs as practised by the most prominent of the water companies, and which constitute a necessary part of the evil in the properties for the supply of water, which have most frequently formed the topics of disquietude in the metropolis. We cannot entertain that the mode of clearing the water on a large scale in reservoirs by subsidence admits of any improvement for the purification of Thames water. The difficulty and expense to have the reservoirs so constructed as to exclude the rays of the sun, is the means of the water becoming infused with insects and plants, which are generated in all reservoirs, and leaves other extraneous matter. Some of the *confervæ* grow with extraordinary rapidity. We have known a growth of many feet to occur in one day; plants of this character are also liable to rapid decomposition, and, therefore, incapable of removal by the method of subsidence. Admit the system is practical, that the medium of depositing the heavy particles of matter may partially free the water from suspended impurities, it can in no way tend to remove the animal and vegetable matter dissolved in chemical solution—while it is clear that it must be the source of great evil, for, by the agitation which necessarily accompanies every fresh influx of water, the filth in the reservoirs is constantly stirred up, and becomes renewed source of contamination to the whole mass, and when thrown into the receptacles of houses, it forms a certain deposit of filth, which deposit has not only a tendency to produce vegetation of the *confervæ genus*, but generate diseases of the glandular affections, dyspepsia, dysentery, &c., and in all cases aggravated by the use of stagnant Thames water. Reservoirs may be constructed of magnitude for the desirable purpose of clarifying fœtid water by deposition; yet, it cannot be shown to restore an impure fluid to a wholesome beverage, because, however eminently useful reservoirs may be, for an efficient and well-regulated supply of water in cases of fire becomes palpably objectionable when applied to the purification of Thames water. The attempt to get over the difficulty by permitting the water to remain at rest a sufficient time to become clear, in no instance have they succeeded so to materially to improve their supply; for, when most perfectly performed, the organic matter in a state of minute division, and the insects contained in the water, so far from being got rid of, becomes even more numerous when water is confined without any motion, either by a current passing through it, or otherwise, it generally acquires an unpleasant odour and taste. In this state it abounds with animalcule, generated during the decomposition of animal and vegetable matter; consequently, the putrescence attending the gradual decay of these deleterious substances not only renders the water opaque and repulsive in appearance, but offensive to the senses, as well as objectionable and unwholesome for domestic purposes.

The practicability of the system for the filtration of water in any locality, and under any circumstances by means of the simple mechanical operation of artificial sand filters, or filtering machines, is an unsound theory—a theory little understood; that it may not be uninteresting to give a descriptive account of the system of filtration—a mere surface view, however, of this question is unsatisfactory; it is necessary, therefore, to place the public thoroughly *au fait* with regard to the various methods in operation, and whether the medium adopted has fulfilled the expectations entertained, or possess the qualities ascribed, to the systems. With this object, we have studied the subject intimately, examined the several machines as in practise at the various works, and the nature of some patents in this country and the continent, and other systems, which, for the last quarter of a century, have been brought before the public; and, as the subject is one to which the community of the metropolis have turned their attention, we hope, when we contemplate the results, and the thousands of pounds expended in the various systems of filtration now in operation, both in our own and other countries, we may be allowed to enter into the merits and demerits of the question. The condition for an efficient and practical system of filtration depends on the nature of its filtering material, and the quality of the water it has to filter; it is not sufficient only that we simply avail ourselves of an advantageous locality, or construct filters of large dimensions or manufacture our machines—or that the filter should be porous; its chemical nature should be such that it cannot change under long continued moisture, decompose, ferment, or by mechanical rupture allow particles of its substance to pass away with the filtered water. The experience, however, afforded in the immense capital expended under the direction of skilful engineers, has proved ineffectual to deprive Thames water of its deleterious qualities previous to its passing from the reservoirs to the cisterns, which should at least induce caution before we attempt to decide in favour of any system to cleanse water containing a ponderable quantity of impure matter. The principles of filtration have been lost sight of; men have not borne in mind that, when water filters through artificial beds of sand and gravel, it deposits its solid impurities to a certain depth between the interstices of the sand and gravel, so that the mass, which was at first a porous filter, will become impermeable earth, the closing of the pores of the filtering medium is directly, as the proportional quantity of dirt held in the water, and the quantity of water filtered; thus it will be seen, on taking out a given quantity of the filtering material from the surface of such filtering beds as those at Chelsea, Battersea, and Vauxhall, that the solid matter have penetrated considerable depth below the surface, gradually diminishing the quantity of water filtering as the pores are filled up by fresh minute matter, until the filtration ceases by the obstruction of the porous mass. All filters designed to clarify water, loaded with vegetable and animal matter, must be more or less defective on this account—whether we look to the extent of the filtering surface, which may allow of filtration for a period of time, or to the artificial arrangement of filtering beds, or to the quality of the filtering material, or to the compact instrument of the mechanical inventor—it cannot be shown that there exists any means for the constant porosity of the filtering surface, so to obtain a perpetual and abundant supply of salubrious water. On this head we may state the results of some experiments made by a skilful engineer upon sand and gravel filters. The filter, which yielded at the rate of ten gallons the first week, yielded nine the second week; only six the third week; and, only two the fourth week; so that a large filter, which may render abundance of water, will, after a time, show a rapid decrease of its product, and the ultimate total obstruction.

The essential requisite for a system of filtration is its certainty and permanency, as well as the means of extending the product of filtered water, with the increased wants of a population, without the chance of diminution or failure from any cause whatever. The best constructed filter must always be open to the defect of uncertainty in the quantity and quality, which has, for its object, the cleansing of water, subject to the pollution of a great city, consequently, in the ultimate cost of construction. The engineer may calculate something of the cost of his plan, but very little on the certainty of result; but, as the cost depends on the result, the cost of obtaining a certain quantity of water is necessarily uncertain. The result of such operations have always disappointed expectations, they have fallen short of calculations, and thus have led to much larger outlay of capital than was at first contemplated. It is with relation to these preceding principles that we examine the principal means for the purification of water by filtration, on a large scale, intended to filter so abundantly, as to be susceptible of adoption by the water companies, but in recounting the schemes proposed at various periods, such only will be selected as seem to be deserving of notice, either for their novelty or utility. The systems of filtration which we shall examine generally is, that of the extensive filtering beds, such as those of Chelsea, Battersea, and Vauxhall, and to M. Maurrass's, filtering machine in operation for a few months at New River Head; for few filters have been invented which have stood the test of even a few weeks' experiments, while others have succumbed to the principal defect of imparting impurities to the water they propose to purify and render potable.

[*To be continued in next week's Mining Journal.*]

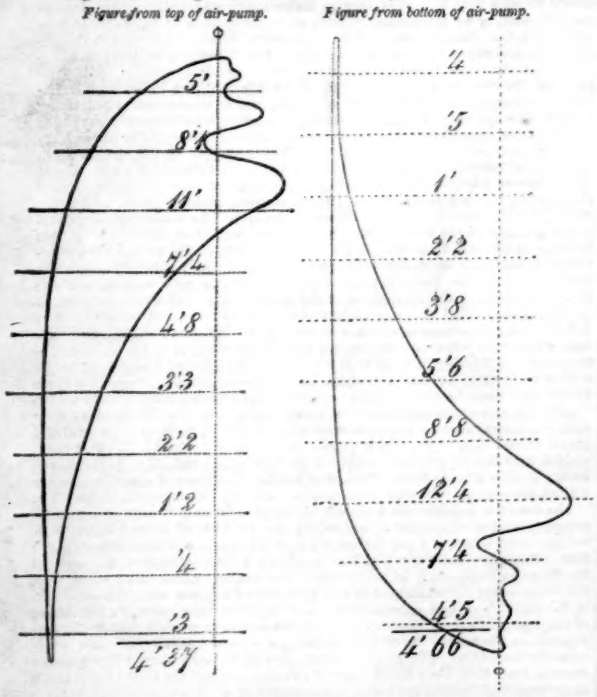
IRON TRADE OF AMERICA.—A gradual and apparently permanent improvement is taking place in the iron manufacture of the United States, and its present market price enables the manufacturer to realise large profits. Some of the smelting establishments are upon an extensive scale, quite commensurate with those of England. The Montour Iron-Works are now producing 900 tons of metal weekly, one-half of which is converted into bar-iron at Wilkesbarre; the pig metal can be manufactured at $15 per ton, and the bar at a cost of $37—the trans-Atlantic market price being now $35 for pig, and $70 for common bar-iron. These profits are unusually large, but the competition which must arise, will, of necessity, lower prices. This company are now erecting another immense furnace and rolling-mill, which will manufacture 12,000 tons of railway iron per annum. The Mount Savage Company are making 100 tons per week, and expect to double this quantity; there are other strong evidences of an increase of make from various sources in the union, and the price must, in consequence, gradually decline. An important project has been determined on—viz., the completion of the Ohio and Lake Erie Railway, which will require a considerable portion of railway iron, prove a line of much consequence in a commercial view, and will eventually lead to a complete line of railways from New York and Boston to Cincinnati.

Original Correspondence.

THE VACUUM IN ATMOSPHERIC PROPULSION PRODUCED BY THE DIRECT ACTION OF STEAM.

Sir,—On reading the article, which appeared in your Journal of July 26th, informing us that Mr. James Nasmyth proposes to exhaust the propulsion tube of atmospheric railways, by the application of his favourite mode, direct action in alternately filling vessels with steam, which first forces the air out, and, on being condensed, produces a vacuum, into which air from the main on the opening of the valve is admitted—by continuing this process, the propulsion tube would be exhausted. As one of the admirers of Mr. J. Nasmyth's useful and ingenious inventions, I am led to make the following remarks on this, like its predecessors, simple and thus far commendable idea, because I think the new plan will not realise greater economy in the use of steam (than that produced through the instrumentality of the engine), which, in the article before us, is said to be of the first importance to that infant system, in enabling it to compete with its more matured rival. There is nothing in the nature of the thing to cause regret, but much to admire in the diversity of opinions men entertain on almost all subjects. As nothing can be more conducive to progression, than that myriads of intelligent beings should be enabled to contemplate, from different points and under different aspects, the great variety of objects that surround us, so that each may derive from others suggestive hints, which may enable all to extend their range of inquiry—to this all fair and candid discussion is conducive. As my views may differ from Mr. Nasmyth's, in this spirit I would offer them, doubting not but in such they will be received. We are told that the air is driven out unmixed with the steam—no doubt by the steam being introduced at the top it is so to a considerable extent; but can it be completely so, without steam passing off with the last portion of air? My own experiments lead me to think not; though, as the air has to pass through water, of course, any steam that may pass with the air out of the condenser cannot be seen; but this is a question of minor importance. As I anticipate that the steam, being of no service on Mr. Nasmyth's plan more than three or four pounds above the atmosphere, and that to force the air out of the condenser, for such it is, will require the steam to be at least sixteen pounds pressure (including the atmosphere) at the time the injection is introduced, this being the case, I think it will be found in practice an expensive mode, in so far as coal and steam are concerned. But the friction of the engine is saved, together with the extra cost; it therefore becomes a question, how far the economy produced by the engine in its use of steam, for producing a given degree of exhaustion, is equivalent to a good interest for the extra capital invested; this must vary according to the price of coal in different localities. I apprehend it will be considered fair, if I suppose Mr. Nasmyth will require steam of sixteen pounds pressure to act against the atmosphere, and the column of water, through which the air passes, together with the resistance due to the raising of the valve. We have no size given of the vessels used, nor is it material to institute a comparison of the merits of the old mode with the new one. I will suppose the vessel in which the vacuum is produced to be a cylindrical one of three feet diameter and six feet long, to be supplied with steam, equal in pressure to sixteen pounds, it would then require twenty-six ounces of steam for each operation, which would produce a mechanical effect, supposing a perfect vacuum and no friction, equal to 16,272 lbs. lifted through six feet. On referring to the duty of the Cornish engines, in 1835, it will be found that even then twenty-six ounces of steam produced a mechanical effect of 33,000 lbs., lifted through six feet: or more than double what the same weight of steam can effect by the mode under consideration. But the advantages of the old system does not stop here: when pumping of air out of a partial vacuum be the work to be performed by the two modes, as by Mr. Nasmyth's plan, as much steam will be used to force out a vessel full of air at five pounds pressure, as at fifteen pounds, simply because it must attain the latter pressure before the emission valve will rise; an indication figure taken off one of the air pumps would show that no such waste of mechanical effect is required when it is used. Not having at hand other experiments of this kind, I trust I may be excused if I refer to figures, taken by myself, and given in my pamphlet—the one off the top and the other the bottom of the air-pump connected with the engine there described: the top figure was produced under circumstances analagous to those of the pumps in question, there being no water to pump out, whilst the vacuum was equal to ten pounds: it is true, the bottom figure shows a little greater resistance, owing to there being a head of water of nearly three feet. The figure here

Figure from top of air-pump. *Figure from bottom of air-pump.*



alluded to, shows that at no time was the resistance greater than eleven pounds to the square inch, whilst the average resistance is little above four pounds. Will it be objected to me, that the figure given at that particular pressure is not a just representation of the resistance at the commencement of the exhaustion, or with a better vacuum: I grant its want of strict accuracy, but, for practical purposes, it will be found not to mislead materially. The conclusion that follows, from the preceding fact, is that by the use of the air-pump, the resistance is reduced from sixteen pounds to little more than four pounds, and, by the use of the engine, the useful effect of twenty-six ounces of steam is increased from sixteen pounds to thirty-three pounds. As my object is to point to the truth, and not to prejudice any against Mr. Nasmyth's invention, but that all may examine it fairly, we will take the saving by the rising of the pump at one-half, and that by the engine in the use of steam at one-half also, and then suppose Mr. Nasmyth to require thirty cubic feet of water, to be converted into steam, per hour, to exhaust a given length of tube; supposing, also, no difference in the coal required to convert a cubic foot of water into steam on both systems, but that it requires eight pounds of coal. We shall then have, for Mr. Nasmyth's plan, 240 pounds of coal, and, on the old plan, sixty pounds: it occurs to me that this will be doubted at first sight, but it should be borne in mind, that we have here a double operation, of the expansive property—first, in the increased effect of the steam, to overcome a given resistance; and, secondly, by the expansive action of air, as it is expelled by an enclosed pump, in materially diminishing the amount of power required for its expulsion, when compared with a system, which, to exhaust a vessel full of air at five pounds pressure, requires the vessel to be filled with steam at fifteen or sixteen pounds pressure. Or, supposing coals at 12s. per ton, which is a low price for average situations for such as eight pounds will evaporate a cubic foot of water, we have, then, in favour of the old plan, on a consumption equal to 300 days, a saving of 144*l.* in the cost of coal. If the extra cost, attendant on engine and pumps, were 700*l.*, this saving would afford an interest of 20 per cent. in favour of the old plan; perhaps the above-stated extra cost is not an unfair one, considering that on Mr. Nasmyth's plan the boilers, together with his exhausting vessels, would have to be provided.

T. Craddock.

Broad-st., Birmingham, July 29.

IMPEDIMENTS TO THE PROGRESS OF USEFUL INVENTIONS.

Sir,—It is encouraging to all seekers of truth and lovers of fair-play to perceive that you dare to call in question not only the propriety, but the justice, of those base attacks which Editors of some scientific periodicals are continually putting forth to foster prejudice and serve the interested, in thus doing what they can to suppress and mislead public opinion upon matters which one would think deserve an impartial investigation, not only on account of the sacrifice made for their attainment, but also the good arising therefrom to mankind, in so far as they may be found useful—I allude to the late attack on Mr. Pilbrow, and your animadversions thereon. Does the history of the world show that mankind hath been so lavish in their patronage, and impartial in their examination of truths, established by rigid induction from observable phenomena?—doth it not show that almost all useful inventions have been realized only by laborious and painful perseverance, not only to gain a clear conception of the abstract principle, but the still more laborious and painful part—the carrying of these principles out practically. With what, short of horror and disgust, can one behold all manner of arts used for the suppression of such efforts? Is not science degraded to the lowest depth, when the channels she should flow through are made also the medium for misrepresentation and injustice? Methinks the true friends of science, the real lovers of truth, would do well to check this indiscriminate denunciation of inventions. It doth appear to me, that the legitimate and honourable, as well as useful, purpose for which such periodicals are well adapted—in so far as their Editors may deem it proper to notice inventions at all—would be, to elicit and illustrate, first, the principles on which inventions profess to be based, with the means proposed for adapting such principles to practice, and the results that may fairly be deduced or anticipated therefrom. If this were conducted with fairness and candour, neither leaning, on the one hand, towards powerful interests, nor, on the other, puffing up inventions beyond their deserts, such publications would then afford a fair index whereby to judge of and appreciate the various inventions at any time before the public, instead of their being, as I fear they too often are, only the mere index of the paid-for opinion, either in disparagement or commendation, according as the printer is moved by patronage or purchase from the one side or the other. So far as this is the case, it degrades science to the level of sycophancy and chicanery, if not dishonesty. I would hope this is the exception, and not the rule; for if these things are practised on scientific subjects, what wonder that they pass where they are less easy of detection? For nearly two centuries hath scientific principles—I mean first principles—been redeemed from the chaotic confusion up to which time they had remained, affording abundant wranglings, but little progress in their development and application to the well-being of man. There is fair ground for belief that, were first principles as clearly defined as they may be on other subjects, much of the disputes and wranglings would vanish, truth would gain the ascendancy, and advance with an accelerated pace, scattering her blessings on all, not excepting her opposers.

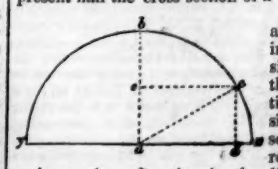
Is it not, to say the least, a strange inconsistency to fire the youthful mind, by glowingly depicting the vast importance of cultivating the intellectual and moral powers which, when, by the cultivation of those powers, it should catch a glimpse of something promising, to increase the conveniences and comforts of the human race, the scene is then completely changed, and, as far as human means can be made available, they are exerted to convert these powers into a curse. But, perhaps, it may be said, that Providence ordaineth it so; sooner shall I believe the paper I write on to be black, than assent to such a conclusion. That Providence permits it I can both understand and believe. Nor am I able to see how it could be otherwise, without destroying the free agency of his creature, man; it is also encouraging to observe that Providence hath ordained that the abuse of this privilege should re-act on itself, so that error and evil is temporary, whilst truth and virtue is expansive and continuous. The question here occurs, what is the most likely way to remove this inconsistency? None so likely, as universally to call forth and expand these powers in the great body of the people. Then, and not till then, I fear, will there be found a power equal to modify and render harmless that monopolising spirit, which hath rendered many men odious, as partisans, whilst, as individuals, they command our respect and veneration for their virtues.

I speak from experience, when I say that nothing can be more calculated to repress all generous impressions—all ennobling anticipations of the gradual advance of mankind, towards the honest and universal reception of truth, than that, after years of toil and thought, and that, too, of a kind which few experience, and which none would, could they see the reality ere they set out. But Nature is lovely and inviting; there is a charm in investigating her modes of operation—there is, as it were, an instinctive desire to modify and combine the elements she presents to our mind, so as to render them subservient to our will and advantage—there is, too, a natural and almost involuntary conviction, at least, such, I confess, I felt, that we have only to prove the fact that, by such combinations, you can produce the desired results, to obtain the assent and co-operation of others. For, in my "simplicity," I did think none of those perverting influences would enter into a subject of this nature, which, I was conscious, so warred against truth on other matters. Here my "simplicity" misled me, for I found one of these highly-patronised periodicals attacking and injuring me in a manner it, nor any other publication, would have dared to have done towards the condemned criminal, or any one who had concentrated all his powers to the practice of immorality and malevolence. If, Sir, this be science, then my humble petition is—May God deliver me from science.—*Birmingham, June 3.*

T. Craddock.

ON THE RENDING FORCE OF STEAM IN BOILERS.

Sir,—On comparing dates, I find that Mr. Martin could not have seen my communication inserted in the Supplement to the Journal of May 31, when he wrote the letter contained in your paper of the 14th June; but, as he must have since seen it, I should be obliged by his pointing out, if he can, any other error than the one I now correct, in the statements there made. Mr. Martin uses the word longitudinal, and I the word transverse, to express the same thing; therefore, that there may be no misunderstanding on that point, by *longitudinal* rending force, I mean a force acting in the direction of the axis of the boiler (supposed cylindrical), tending to effect a transverse parting; transverse force, on the other hand, is such as would cause a longitudinal fracture. The first calculation in Mr. Martin's letter is the circumference of a 4½ feet boiler = 169·6 in. × by the pressure, which will give the aggregate of the pressure on the whole circumference per lineal inch; this, divided by 2 = pressure on semi circumference acting radially, or in all points at right angles to the surface of the boiler—therefore, this cannot express the rending force, which must be considered, at one time, as acting in only one direction, though we may successively consider it as acting in every imaginable direction. In order to be clearly understood, I must resort to a simple figure, which we may suppose to represent half the cross section of a cylindrical boiler.



Let us consider the rending force to act in the direction *a b*, or upwards; now, in order to ascertain what the steam pressing in any other direction contributes to this force, take that acting in the direction *a c*—draw the sine *c d* and the cosine *c e*; the diagonal, *a c*, may be resolved into two forces, expressed, in their relative intensity, by the sine *c d* and the cosine *c e* (or *a d*) acting in the directions *a b* and *y z*; therefore, steam pressing in the direction *a c*, contributes to the rending force in the direction *a b*, in the same ratio to the pressure as the sine *c d* bears to the rad. *a b*, and to the rending force in the direction *y z*, in the same ratio to the pressure as the cosine bears to the rad. If the angle, *b a c*, were 60 deg., *c d* would be half rad.; and, if an angle of 45 deg., the sine and cosine would be equal. It appears to me, that the rending force per lineal inch in a 4½ feet boiler would be found by × diam. = 54 in. by 50 = pressure in lbs. = 2700 lbs., which, with half-inch plate, would be sustained by a section of iron of one square inch.

The statement in my last, that a cylindrical boiler could be lengthened to any extent, without increasing the rending force, is not correct; for, as the ends of a boiler bear a proportion of the transverse stress—if they are equal to the sides (as was the case in my supposed rectangular vessel)—they take half thereof; but it is evident, the longer the boiler the less proportion is borne by the ends; it is, therefore, better at once to take the maximum, which will be double the estimated force of 893 lbs. By lengthening a boiler, the transverse rending force is increased, and the equality between the transverse and longitudinal forces existing in a sphere, and a plane ended cylindrical boiler, of a length equal to its diameter, is therefore destroyed; for instance, in boilers of three feet diameter, half-inch plate, 6, 12, 18, 24, and 30 feet long respectively, the transverse rending forces will be, with steam at 50 lbs., 1244, 1486, 1582, 1633, and 1664 lbs. per square inch of iron, while the longitudinal rending force remains 893 lbs., as at first. The last calculation in Mr. Martin's letter is incorrect—the result should be 1350 lbs., instead of 2700 lbs., which materially affects the conclusion arrived at. As this letter calls in question the accuracy of some of the statements made by a correspondent giving his name, I deem it no longer right to conceal mine.

Dickinson Brunton.

Dolgelly, Merioneth, June 19.

THE ISTHMUS OF PANAMA.

The making of a communication between the South Pacific and the Atlantic has been in contemplation for this last half century. After various surveys that have been taken, as to whether a canal, railroad, or macadamised road would be the most practicable, it appears that the latter, with the assistance of a short navigable transit, is the most likely of success. A private letter from Panama says—"The expenses of this undertaking will certainly be rather large at first, but it is sure to return a good profit, of at least 4 to 6 per cent. on the capital thus sunk. This part of the southern world is not known—its mineral riches are unbounded, and the soil most fertile; but the whole is lost for want of the enterprising hand of industry, combined with the assistance of European machinery." After the most mature examination, that has been made by the best engineers, it is distinctly ascertained that the cutting of a navigable ship canal would be an impossibility, or, at least, a most ruinous speculation. To prove that a good road would be most practicable and preferable, is, that the rains fall heavily here during the winter, for six or seven months, which would impede the workmen employed in excavating a canal, admitting that such might be done; but it would constantly be overflown, so as to render it dangerous to the adjoining neighbourhood, as Chagres and Rio Grande are both high. It would, from the scientific calculations of Messrs. Lloyd, be about 585 feet from one canal to the other, requiring at least sixty-five locks, as otherwise there would be no means of causing a reflux of the waters that would be in such a body, and that often in a stagnant state, which would frequently inundate the lower grounds on each side. There is as yet no certain estimate what the excavation of the Rio Grande would cost, but, immense as it would be, at least ten leagues, which, at a fair estimate, including locks, &c., would be nearly $240,000, without including the expense of a supplying canal, the casualties of the overflowing of the sea, destruction of locks, &c. From the official return it appears, during last year, the following vessels doubled Cape Horn—200 ships, of which thirty were ships of war, and others, too large to pass a canal; to this must be added 150 whalers, also of large dimensions. It is true they would not have to sail through a rough sea, but, for economy's sake, they would not use a canal, if it were even wide enough to admit of a sufficient draught of water, as they are strong sea boats, of 300 tons and upwards, and, by the calculation made, it would cost them at the rate of one dollar per ton, to pass the canal each way, making at least 600 dollars, without including other expenses. These vessels generally have a crew of thirty hardy men, habituated from their earliest infancy to all the rigours of the ocean, and, consequently, they would not embark in the whale fishery for a short voyage. Therefore, besides a few small vessels from or to Australia, and, on an average, 100 per annum from the United States, who would take advantage of this new transit, the speculators would find the profits of a canal more *water* than *wine*. From Europe to Valparaiso it is seventy to eighty days, passing by the straits of Magalhens, by the isthmus, from Europe to Chagres forty-five to fifty days, five days going up the canal, passing the locks, unloading, &c.—in all 100 days; thereby losing at least twenty days in the transit to Lima. The greater part of the inhabitants of South America do not wish for this navigable opening of the Isthmus of Panama, for its traffic and its commerce is daily increasing, and the winds in this quarter are generally favourable, so that the canal offers no attraction. The Government will not enter into this speculation, either in this country or Europe, which proves that it does not appear to them an *El Dorado* undertaking. It would, on a moderate calculation, take ten years to cut the canal, so that for at least thirty years no return could be expected, and there is not a probability that commerce will so increase to 18,000 ships, which would be required to return an interest of 10 to 15 per cent. to the capitalists. Europe never was so industrious and commercial as at present—all are trying to sell their manufactures the cheapest: English, French, and North Americans, but particularly the latter, would try to overthrow all other nations in the New World, as she abounds in steamers, and is trying to establish a flourishing colony on the river Columbia, which might emulate with New York—thereby taking advantage of 600 leagues (1800 miles), by means of canals and railroads, they would unite Lake Superior and the City of Columbia, and would, therefore, become the centre of commerce of the North Pacific or Boreal ocean. They have an eye to the trade of the whole of the Pacific, and even China, and are anxious that European adventurers will do that for them, which they cannot do themselves, by cutting an opening for their traffic.

It is not at all probable that ships from Europe going to the East Indies or China would pass the Isthmus of Panama; they will always go the shortest way by doubling the Cape of Good Hope, especially as the greatest traffic to China is by way of Calcutta, therefore not touching the Pacific at all. If there is an isthmus to be opened for the advantage of Europe, it is not that of Panama, but that of Suez, which is the centre of the world, trade, and politics, bounded by Turkey, Persia, and the Red Sea; and even now by way of Marseilles and Alexandria a traveller may go to India in one month, and China in two. For this important work it is necessary that a second Alexander the Great should spring up, as neither steamboats, locomotives, carriages, &c., are wanting. This was one of the wonderful ideas of the immortal Napoleon, to join the Red Sea and the Mediterranean, so as to destroy, if possible, the commerce of Great Britain in the East. North America is for the Isthmus of Panama, as it would open a wide field for her commerce in the Pacific; this the British Admiralty can plainly see through, and are, therefore, against it, on the ground that sailing round by Cape Horn is a good school for her seamen; but, at the same time, it is a political motive. To France it would be but of very little advantage; it is true she has appointed a commission of engineers to inquire into the practicability of the undertaking, but not that she will take a part in it herself. The Mediterranean is the field for her speculations; the coast of Italy, Greece, Egypt, Turkey, and the Dardanelles, as a check to the increasing ambition of Russia in the Black Sea, which power is using every political intrigue to gain possession of Turkey, Georgia, Circassia, Persia, and, if possible, to overthrow British influence in India and China. These two friendly nations—England and France—must watch their interests in Europe, to keep up the equilibrium of commercial power against the Aristocrat—therefore, the result of an opening of the Isthmus of Panama is of very little consideration to them. It is, therefore, a wild speculation thinking of ever cutting a navigable canal in this part of South America, that will admit of ships of large burden to pass. The isthmus offers every facility for the construction of a good macadamised road, a tramroad, or even railroad, but a canal is a chimera kept up by European adventurers to gull the public into a speculation, which themselves will reap the benefits of. A company is forming, however, for making a good road across the isthmus, under the auspices of the Government, and the natives will render every assistance to carry the project out, as the workmen can be obtained at very low wages. With the facilities afforded by the excellent steam-vessels of the Royal West Indian Company, to and from England and Chagres, and Vera Cruz; and the South Pacific Steam Navigation Company's vessels running from Valparaiso to Lima and Callao, in the Pacific, will keep up a constant intercourse on each side the two oceans—whilst by a road well provided with horses, mules, open carriages, and waggons, and every accommodation for travellers, the enterprise promises to be a very successful one.

Substitute for the Connecting Rod and Crank in Steam Engines.—In the *Apprentice*, a few weeks since, an article appeared on this subject, taken from "an unpublished pamphlet, entited, *A new method of converting Rectilinear into Rotatory Motion, applied to the Steam Engine.*" With the exception of some of the mathematical truisms on rectilinear, rotary, and parallel motion, contained in the introductory observations, we must plead ignorance, and confess we cannot comprehend the affair. The diagram is so badly executed, the description so vague, and the whole so unintelligible, that we should advise the author of the "unpublished pamphlet," to obtain the advice and assistance of some scientific man, to explain his ideas in a clear and simple manner, if the said pamphlet is intended to be published; the conviction of the editors of the *Apprentice* appears to be, that the plan is useless in practice.